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# PEOPLE'S FESTIVAL OF INNOVATIONS, 2024

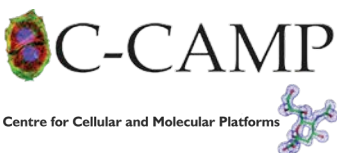
November 25-29, 2024

Affordable, Inclusive and Accessible Innovations impacting society :

*Addressing local and global challenges*



Organizing Partners





## MESSAGE

Dr. Renu Swarup



The *People's Festival of Innovation -2024*, the third in the series is being held from 25 th Nov 2024 to 29 th Nov 2024 at India International Centre, New Delhi. Organised by C-CAMP, Bengaluru and GIAN, Ahmedabad

. This festival is unique since it brings together both Deeptech and Grassroot Innovators providing them a platform for showcasing their innovations and creating synergies between both them to develop affordable ,inclusive and accessible innovations which can be scaled for deployment to address local , national and global challenges .

The Festival this year is set to be a congregation of innovators, policymakers, industry experts, investors, and thought leaders who will collectively over five days showcase outstanding contributions ,identify specific challenges faced in scaling these innovations and successfully deploying these for addressing societal needs. It is a platform dedicated to showcasing the incredible strides that our country has made in the field of science-led innovation, especially in the biotech sector. The festival will not only spotlight high-tech, commercially viable innovations but also grassroots inventions addressing local issues and rural innovations that have had a profound impact on society. The Festival has two sections —an exhibition of about 100 Innovations displayed through Posters and Live Exhibits . A number of specially curated Panel Discussions which bring together experts from industry and academia,

innovators , policy makers and other stakeholders will discuss the challenges and opportunities for scaling innovations .

The robust Innovation ecosystem in the country has today provided a strong network which catalyses indigenous innovations and facilitates their scale up for societal impact .Through this festival, innovators from across the country including J&K, North East and emerging ecosystems will come together to share success stories ,identify challenges in taking ideas to market and discuss with the vast network of experts, successful entrepreneurs, investors and ecosystem enablers, the solutions to address these.

We hope that this festival will be an important step in the journey of the innovators who are striving hard to take socially relevant innovations through the development value chain to deployment .An Accelerator programme has been designed to identify some successful and socially relevant innovations and provide them the necessary hand holding to help them to scale.

We look forward to exciting five days of the coming together of all key enablers and components of the Innovation ecosystem to discuss challenges and solutions to develop and deliver affordable and accessible novel technologies and products

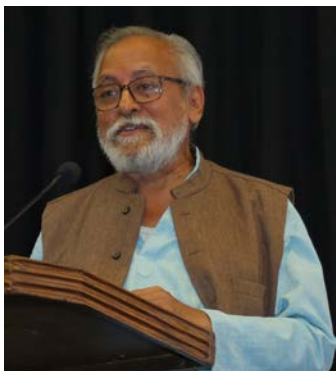


(Dr. Renu Swarup)

*Former Secretary to Government of India  
Department of Biotechnology, Ministry of Science  
and Technology*

## MESSAGE

Prof. Anil Gupta



The role of grassroots innovations in inclusive development is well-recognised around the world. Both innovations from and for grassroots have a role to play in making the inclusive innovations

ecosystem more robust and rich. However, an experiment that has been going on for last three years signifies a new dimension of ecosystem enrichment. Thanks to the partnership between C-camp and GIAN, innovations from deep tech and grassroots having brought together at People's Festival of Innovation (PFoI) hosted by India International Centre, New Delhi. It is hoped that deep tech innovators will get inspired by extremely affordable solutions developed by the grassroots innovator very frugally. At the same time, it is expected that some of the deep tech innovators might find grassroots innovators as partner for exploring a synergy at the field level. Grassroots innovators can test their solutions at the community level and give feedback particularly from some of the most economically marginal environments. There is also a possibility that some of the young grassroots innovators may like to learn the art of scaling up and finishing the solutions from the deep tech innovators.

This time there are several other initiatives being taken to make the People's Festival of Innovation a hub of grassroots to global (G2G) model of innovations propagated by the Honey Bee Network. Chief Innovation Officers from 12 French companies will visit the People's Festival of Innovation and interact with the grassroots innovators and look at the exhibition. We don't know what may come out of this interaction but surely, we need more such interactions at this festival, a unique platform of its kind in the country. There is another distinctive feature of PFoI which is recognition of some of the outstanding innovators from the country. Honey

Bee Network Creativity and Inclusive Innovations Awards (HBNCRIIA-India) will be given away to 15 select innovations. The year-long campaign was powered by Amazon, India in partnership with GIAN. Out of more than 2500 entries, 75 were shortlisted and most were met in different parts of the country. Thirty three out of these were shortlisted for final jury evaluation at IIMA. The jury was chaired by Dr. RA Mashelkar, FRS and chair of Research Advisory Committee of Honey Bee Network. The jury included Director, IIMA; Director, AcSIR; Vice Chancellor, Gujarat University; and Dr. Renu Swarup, former secretary DBT and a key curator of PFoI besides the representatives of top institutions like IITs, IIMA, IISc, Amazon India and many other institutions including Development Venture Fund, Bharat next.

I am extremely happy that the interaction among deep tech innovators and innovators for and from grassroots may generate many new possibilities for making India a global leader in extremely frugal, affordable and inclusive innovations. We also hope that slowly and slowly other developing countries may also benefit from these solutions to meet various Sustainable Development Goals (SDG).

GIAN, Honey Bee Network and its sister institution SRISTI are looking forward to PFoI with great expectation of unleashing the full developmental potential of deep tech innovations mobilised by C-camp and grassroots innovations by GIAN and the volunteers of Honey Bee Network.

Dr Anamika Dey, CEO GIAN joins me in wishing PFoI a great success in transcending the limits of frugality, inclusivity and innovation in the service of the common people of our country and the world at large.

Prof. Anil K Gupta



## MESSAGE

Dr. Swati Basu



Over the last decade, India has laid emphasis on innovation as a growth strategy. As a result of this, there is a rise in its 'World Innovation Index' ranking . Innovation creates growth in the society by addressing its diverse challenges and in

the process changes lives. Thus, It is pivotal for the economic and human capital growth of the country. It is pertinent that emphasis should be laid not only on the number of the innovators that are encouraged and nurtured, but also in ensuring its impact is felt at the various levels of the society.

'People's Festival of Innovation' at the India International Centre has been providing an excellent platform for the second consecutive year, for showcasing various promising innovations that are being undertaken by different innovators across the country.

The first year was dedicated towards showcasing and celebrating various exciting innovations of grassroot and deep-tech innovators who shared their experiences and exchanged ideas regarding their possible complementarity in catalysing societal growth. It provided awareness and enhanced public dialogues among the innovation community.

While it is important that these innovations are showcased to a larger public including students, budding entrepreneurs, researchers and academia, it is crucial to engage with various industries and investors for scaling up these innovations based on their commercial viabilities.

As a consequence and in continuation of last year 'People's Festival of Innovation', this year's theme is **Scaling Innovations: From Idea to Impact**. These innovations cut across different sectors of national importance viz. Healthcare, Agriculture, Animal Health, farming machinery, natural resource management, environment and clean energy.

The current year is continuing to provide a platform and an opportunity to draw a path forward by identifying possible mechanisms to scale the innovations and assessing their likely impact on the society at large through fruitful interactions with investors, industry leaders and engaging with policy makers and domain experts.

The present e-book has compiled the amazing work of some of the promising innovators of the country and their incredible journey towards attaining the same. This will go a long way in inspiring the students, researchers, and entrepreneurs to become a part of the larger innovation eco system of the country and the world for a better future for all.

**Dr. Swati Basu**

# FOREWORD

Dr Taslimarif Saiyed



Centre for Cellular and Molecular Platforms (C-CAMP) is one of the founding partners of the People's Festival of Innovations (PFI), India's largest and most inclusive celebration of innovation. PFI is a unique national platform that embraces both advanced scientific and grassroots innovations, aiming to foster public engagement, dialogue, and participation in supporting India's dynamic innovation ecosystem. Here, innovations in agriculture stand alongside advancements in stem cell therapy, and traditional sustainability practices intersect with cutting-edge greenhouse gas fermentation technologies. As co-organizers, we are excited to share India's Innovation Story and engage the public in this inspiring journey.

The criticality of such a festival lies in creating opportunities for a showcasing of emerging technologies, grassroots and deep-science to stakeholders across the innovation value chain including laypersons like you and me, businesses, channel partners, investors, philanthropies, international partners and finally the public service systems. The hope is to foster cross-talks across specialties and disciplines that have historically ignited ideas for out-of-the-box innovation thinking whether in knowledge, technology or process development in the journey of idea-to-market.

The crux of People's Festival of Innovations as the mentors and organizers see it lies in understanding that the scope for problem-solving is not necessarily confined to the higher echelons

of scientific research, that grassroots innovations with more immediate impact may solve problems on the ground faster. At the same time we deeply appreciate that cutting-edge progress and state-of-the-art scientific advancements catalyze pathbreaking impact on the long run, changing how we work, live and coexist. The confluence of both of these is the uniqueness of PFI.

Under the co-leadership of Dr Renu Swarup, Prof Anil Gupta, Dr Swati Basu and me, and with the able support of our fantastic collective teams across co-partners C-CAMP, GIAN and HoneyBee Network, this is an attempt to introduce you to a vibrant community of innovators be it healthcare, Agriculture & Animal Health, farm machinery, Natural resource management or Environment & Clean Energy, from Metros, Tier II, Tier III cities and deeply rural societies. The Conference will bring together Experts from the ecosystem —policy makers, industry, academia, investors, philanthropists, international organisations, regulators and incubators to witness India's modern day innovation revolution, discuss challenges and suggest models for building innovation-based entrepreneurs and scaling innovations for deployment so that technologies make larger impact on communities in need.

The objective of innovation is for, and with the people. We hope to ignite conversations on the commonalities of our problems and how grassroots and deeptech innovators in India can complement each other in solving these problems, catalyzing societal growth, and accelerating India's economic rise.

Dr Taslimarif Saiyed  
*Director-CEO, Centre for Cellular and Molecular Platforms C-CAMP*

## SPONSORS

### Serum Institute Of India



Serum Institute of India Ltd. has established itself as the world's largest producer of Measles and DTP group of vaccines. It is estimated that two out of every three children immunized in the world is vaccinated by a vaccine manufactured by Serum Institute. In fact, our range of products have been used in 170 countries across the globe.

Serum Institute of India was founded in 1966 with the aim of manufacturing life-saving immunobiologicals, which were in shortage in the country and imported at high prices. Thereafter, several life-saving biologicals were manufactured at prices affordable to the common man. The Philanthropic philosophy of the company still not only exists but has been proliferated to bring down the prices of newer vaccines such as Hepatitis-B vaccine, Rabies vaccine, Combination vaccine etc. and latest introduction – HPV vaccine, so that not only Indian's, but the entire under-privileged children of the world.

It has been ranked as world's No. 1 biotech company (by no of doses). Serum Institute is associated with WHO and other International agencies for development of newer vaccines. They have a very strong pipeline of biologicals like monoclonals and for dengue and vaccines form many other diseases.

### Bill and Melinda Gates Foundation



Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives.

In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Mark Suzman, under the direction of Co-Chairs Bill Gates and Melinda French Gates and the board of trustees.

### Associate Partners

#### Kalinga Institute of Industrial Technology (KIIT-TBI)



At KIIT-TBI, we're on a mission to empower the next generation of innovators, disruptors, and changemakers. Through our integrated approach to startup incubation and acceleration, we provide aspiring entrepreneurs and startups with the knowledge, skills, and support they need to turn their ideas into reality and build successful ventures from the ground up. Through collaborations with local governments, academic institutions, and industry partners, we've amplified our reach and deepened our impact. Together, we're not just building successful enterprises; we're transforming lives and shaping the future of the eastern and northeastern regions of India.

## Bill and Melinda Gates Foundation



Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Mark Suzman, under the direction of Co-Chairs Bill Gates and Melinda French Gates and the board of trustees.

## Social Alpha



At Social Alpha, we believe that science and technology innovations and entrepreneurship has the potential to bring about a positive change in the life of masses. We search for entrepreneurs and innovators who are on a 'mission to create social, economic and environmental impact' and support them through their 'lab to market' journey, as they create compelling solutions to fight poverty and address India's intractable developmental challenges.

The current science and technology based entrepreneurship ecosystem needs innovative alternatives to mainstream venture investing models – a new category of risk underwriting which is not averse to extremely high early stage risk. We have carefully designed a 3-tier ecosystem architecture to nurture entrepreneurs and innovators through their lab to market journey.

This architecture connects the innovation and investment ecosystems and allows for an effective mechanism for allocating resources to mission driven entrepreneurs. The architecture has been designed to drive convergence between the objectives of the entrepreneurs seeking financial and operational support and the providers of risk capital and technical expertise. Social Alpha was launched in 2016.

Social Alpha architecture is built around a not-for-profit platform, Foundation for Innovation and Social Entrepreneurship (FISE) and operates through a nationwide network of technology and business incubation infrastructure, sponsored and enabled by Tata Trusts, Government of India and a number of academic, philanthropic and corporate partnerships.

## Jagruti Enterprise Centre



Founded in 2001, in India, Jagruti Sewa Sansthan (Jagruti) kicked off with local development of Purvanchal (East UP, India) by training and mentoring its youth. From 2008, it began a two-week yatra (Jagruti Yatra) across India held annually—which, today, brings over 500 participants from across who share visions of entrepreneurship, social impact, and self-discovery and has become a well-known cauldron of inspired discussion, ideation and action. Jagruti, as a movement, addresses the need of middle India in a very positive and catalytic way. It does so with a model of enterprise-led development. It uses the initiative and energy of the youth. It guides, networks, and mentors to create successful outcomes for them. And thereby unleashes the entrepreneurship potential within them, which, if successful, can create a geometric impact upon them—with many positive outcomes for the nation.



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**People's Festival of Innovations (PFoI) 2024**  
**25<sup>th</sup>- 29<sup>th</sup> November, 2024**  
**India International Centre, New Delhi**

**Agenda**

Date	Venue	Time	Sessions
25th Nov	Deshmukh Auditorium (Common Session)	3.00 - 4.30 pm	Inauguration
		3.00-3.10 pm	Inaugural – Lighting the lamp
		3.10-3.15 pm	<b>Welcome Address</b> – Dr. Taslimarif Saiyed, CEO & Director, C-CAMP
		3.15-3.20 pm	<b>Opening Remarks</b> – Dr. Swati Basu, Former Scientific Secretary, O/o PSA
		3.20-3.30 pm	<b>Opening Address</b> - Shri K. N. Shrivastava, Director, IIC
		3.30-3.40 pm	<b>Special Address</b> – Prof. Anil Gupta, Founder, Honey Bee Network, SRISTI, GIAN & NIF, Visiting Faculty, IIMA, IITB, Academy Professor, AcSIR
		3.40-3.50 pm	<b>About the Festival</b> – Dr. Renu Swarup, Former Secretary, Dept. of Biotechnology, Govt. of India - Convergence of Deeptech and Grassroot Innovations
		3.50-4.05 pm	<b>Keynote Address</b> Dr. Sanjay Kumar, Chairman, ASRB
		4.05-4.25 pm	<b>Inaugural Address</b> – Dr. Vinod K Paul, Member, NITI Aayog
		4.25-4.30 pm	<b>Vote of thanks</b> – Dr. Bhavisha Wala, C-CAMP
	Gandhi King Plaza (GKP)	4.30 - 5.30 pm	<b>Inauguration of Exhibition, Tea &amp; Networking</b>
26th Nov	CR1 (Common sessions) Forenoon	10.00 - 2.00 pm	
		10.00-10.30 am	Opening Session- Festival Theme Talk – (Affordable, Inclusive and Accessible Innovations Impacting Society) Prof. V Ramgopal Rao, Vice-Chancellor, Birla Institute of Technology & Science
		10.45-11.45 am	<b>Session 1-An Enabling Policy Framework for Promoting Innovations</b> Moderators Dr. Renu Swarup and Prof. Anil Gupta- Interactive discussion with Innovators Opening 5 mins Policies, incentives and funding for startups for promoting indigenous innovations Panel 30 mins Mr. Shrivastava, Director, IIC, Dr. D.K. Agarwal, Registrar General, PPVFRA, Dr. Anna Roy, Principal Economic Adviser, NITI Aayog Question answer— 25 mins

	Lawn area	11.45-12.00 pm	<b>Tea</b>
		12.00-2.00 pm	<p><b>Session 2 - Promoting Product Innovation</b> Moderator Dr. Taslim 5 mins</p> <p><b>(i) Ecosystem Enablers (30 mins)</b> Prof. Ashwani Pareek, Executive Director, NABI Dr. Jitendra Sharma, MD &amp; Founder CEO, AMTZ Ms. Suman Gupta, COO, RCB</p> <p><b>(ii) Building Scalable Innovation Models (60 mins)</b> Dr. Rohit Srivastava, Department of Biosciences and Bioengineering, IIT Bombay Dr. Suphiya Khan, Deputy Director, Shriram Institute for Industrial Research Dr. Vanita Prasad, CTO, REVY Environmental Solutions Pvt. Ltd. Prof. P. V. Madhusudhan Rao, Dept of mechanical engineering and design, IITD</p>
	Lawn area	2.00 - 3.00 pm	<b>Lunch</b>

	CR1 and CR2 (Separate sessions) Afternoon	Deeptech-Conf. Room 1 3.00-5.00 pm	Deeptech (CR1)	Grassroot (CR2)	Time
		3.00-4.00 pm	<p><b>Session 3: Commercialising Products , Penetrating Markets</b> <b>Moderator</b> – Dr. Manish Diwan, Head - Biofoundry, NCR Biotech Cluster &amp; IVCOL at BIRAC (Opening 5 mins) Lead Talk - Dr. Markandeya Gorantla, Chairman and MD, ATGC Biotech <b>(i) Challenges in commercialising products (45 mins)</b> Dr. Has Mukh, MD and co-founder, Mylab Discovery Solutions Mr. Arun Chandru, Co-founder, Director, Pandorum Technologies Mr. Sachin Dubey, CEO and Founder, Module</p>	<p><b>Session: Grassroots to Global Interaction between Grassroot Innovators and French Delegation</b></p> <p><b>French Delegation:</b> Sylvie Borzakian, Marc Giget, Florent Pratlong, Dominique Leglu, Christophe Liénard, Vincent Maret, Florence Sanson, Stéphane Engel, Pascal Risser, Alexandre Mathevet, Catherine Tanneau, Matthieu Vis, Sabine Fauquez, Adrien Giget, Frauke Hoyer, Matthieu Zoppis</p> <p><b>Grassroot Innovators:</b> Sharwan Kumar, Shahid ul Islam</p>	Grassroot-Conf. Room 2 3.00-5.00 pm

			Innovations Mr. Arpit Dhupar, CEO, Dharaksha Ecosolutions	Mohd Ismail Mir, Aryan Prasad Rawalchand, Vivek Kumar Patel Mahadev, Bharat Panchal Jignesh Patel, Bhanji Bariya Mahesvri, Sandip Panchal Jorsing Syngkli, Shri Stephan Shadap, Jesperson Manih, Alladi Prabhakar, Mende Srinivas, Praveen Kumar, Shaik Usman Gorre Ashok	
		4.00-5.00 pm	<b>(ii) Opportunities for mobilising investments</b> Ms. Padmaja Ruparel, Co-founder, IAN Ms. Rema Subramanian, Co-founder, Ankur Capital Ms. Mansi Aggarwal, Partner, Alkemi Growth Capital	<b>Part II: Opportunity for Indian grassroots innovations to scale globally</b>	4.00-5.00 pm

	Lawn area	5.00 pm	Tea & Networking, Exhibition time
<b>27th Nov</b>	<b>Conf. Room 1 (Common Session)</b>	10.00- 2.00 pm	
		10.00-12.00 pm	<b>Session 4: Masterclass on IP and Technology Management</b> Dr. Shrishendu Mukherjee, MD, Wadhvani Foundation Dr. Malathi Lakshmikumaran, Director, Lakshmikumaran & Sridharan Ms. Pushpa Vijayaraghavan, Sathguru Management Consultants / Medicines Patent Pool
	Lawn area	12.00-12.30 pm	<b>Tea</b>
		12.30 - 2.00 pm	<b>Session 5: Scaling Innovations — Technology Deployment in States and different locations</b> <b>Moderator-</b> Dr. Mrutyunjay Suar, Director General R&D and Innovation at KIIT University Dr. Jatinder Kaur Arora, Former Executive Director, Punjab State Council for S&T, Member Secretary, Punjab Biodiversity Board Dr. Chitra Pattabiraman, SPO Health Innovations, BMGF Mr. Partha Ghosh, Social Alpha
	Lawn area	2.00 - 3.00 pm	<b>Lunch</b>



	GKP	3.00 - 4.30 pm	Story Telling (3 grassroots + 3 deeptech) & Exhibition till 5.30 pm		
	Lawn area	4.30 pm	<b>Tea &amp; Networking</b>		
<b>28th Nov</b>	<b>CR1 &amp; CR2 Separate sessions</b>	10.30-1.00pm	<b>Deeptech (CR1)</b> Investor One-on-One interactions at GKP (IAN, Synapses, Yournest, Social Alpha, Alchemi)	<b>Grassroot (CR2)</b> Investor One-on-One interactions at GKP	Grassroot-Conf. Room 2 10.30-1.00 pm
	Lawn area	11.30-11.50	<b>Tea</b>		
	Lawn area	1.00 - 2.00 pm	<b>Lunch</b>		
	GKP	2.00 - 5.30 pm	Exhibition time		
	GKP	3.00 - 4.30 pm	Story Telling (3 grassroots + 3 deeptech)		
	Lawn area	4.30 pm	<b>Tea &amp; Networking</b>		
<b>29th Nov</b>	<b>GKP (common session)</b>	10.00 – 11.00 pm	<b>Open feedback from PFI participants</b> (Moderator- Dr. Swati Basu; Shri Srivastava, Dr. Renu Swarup, Prof. Anil Gupta, Dr. Anamika)		
		11.00 - 12.45 pm	<b>HBNCRIIA Award function</b> (3 awards and 12 consolation prizes) <b>Guest of Honor</b> – MD Amul, IIC Director, Shri Srivastava, Dr. Renu Swarup		
		12.30 - 1.30 pm	<b>Lunch</b>		

November 25, 2024

Inaugural – Lighting the lamp

PFoI Speaker's Brief Introductions



#### Welcome Address

#### **Dr. Taslimarif Saiyed, CEO & Director, C-CAMP**

The visionary CEO of C-CAMP, stands as a luminary in neurosciences, holding a distinguished Ph.D. from the renowned Max-Planck Institute for Brain Research. His transformative journey includes impactful postdoctoral training at UCSF and influential roles as a Management Consultant in the Bay area, contributing to esteemed biotech firms in the US.

Augmenting his scientific prowess, Dr. Saiyed has undergone strategic management training from esteemed institutions such as UC Santa Cruz, UC Berkeley, and the Wharton School of Management. This unique fusion of scientific acumen and strategic leadership sets him apart as a dynamic force in the field.

At the helm of C-CAMP's Discovery to Innovation Accelerator program, he ardently champions innovation in life sciences and healthcare. His unwavering commitment ensures the seamless translation of groundbreaking discoveries into tangible applications, making significant strides in technology development. Dr. Saiyed stands as a beacon of excellence, driving forward the intersection of scientific ingenuity and strategic brilliance.



#### Opening Remarks

#### **Dr. Swati Basu , Former Scientific Secretary, O/o PSA**

Dr. Swati Basu, at present is scientific consultant in the O/O Principal Scientific Adviser to Government of India in the field of Environment and Climate Sciences. She is Chairing Project Review and Monitoring Committee on establishment of City knowledge Cluster for the country. She is Member, Board of management, TERI school of Advanced Studies.

Retired as Scientific Secretary from the office of Principal Scientific Adviser to Government of India where she was engaged in science advice policy in consonance with the national need as well as global development.

As Advisor in the Ministry of Earth Sciences, played pivotal role for successful implementation of various international agreements and policy decisions related to Earth system Science programs, Played crucial role in modernization of India Meteorological Department.

As Director of the National Centre for Medium Range Weather Forecasting, she was responsible for developing high resolution state-of-Art models, with sophisticated assimilation techniques generating improved weather forecasts for India and neighboring countries.

Born in Delhi, she did her post-graduation from Delhi University in 1979 in Physics and completed her PhD in air pollution modelling from IIT, Delhi in 1983. She has the distinction of being the first Indian woman to go up to 80-degree North

in the Arctic during July 2013 on invitation by Norwegian Government representing India.



### Opening Address

#### Shri K. N. Shrivastava, Director IIC

As the Director of the India International Centre (IIC), he brings over 44 years of extensive experience in Public Administration. A retired IAS Officer from the 1978 Batch, his distinguished journey reached its zenith as the Secretary of the Ministry of Civil Aviation, Government of India.

His commitment to public service is evident in pivotal roles for the Governments of Karnataka and India, overseeing projects like the Almatti Dam and initiating the Bangalore Metro Rail. His expertise spans ministries such as Civil Aviation, External Affairs, the Archaeological Survey of India, Railways, and Mines, including crucial involvement with the Bangalore Metro Rail Corporation Limited.

Internationally, he has been a key part of the Indian Prime Minister's entourage during global visits, showcasing diplomatic acumen in bilateral discussions with the Ministry of State for External Affairs.

This distinguished career reflects steadfast dedication to public service, leaving an enduring impact on governance and development across diverse domains



### Special Address

#### Prof Anil Gupta

*Founder, Honey Bee Network, SRISTI, GIAN & NIF, Visiting Faculty, IIMA & IITB, Academy Professor, ACSIR, CSIR Bhatnagar Fellow 2018-21.*

Padmashree awardee, Dr. Anil K Gupta is a scholar in the area of grassroots innovation. He is the founder of Honey Bee Network, SRISTI, NIF & GIAN. Previously he was a full-time professor and currently he is a visiting faculty at Indian Institute of Management, Ahmedabad and at IIT Bombay. One of his most popular courses is Shodh Yatra. He holds the fellowship of, National Academy of Agricultural Sciences; Fellow, the World Academy of Art and Science, California 2001 and Fellow, INSA; ACSIR Academy professor.



### About the Festival

#### Dr. Renu Swarup

*Former Secretary to Government of India  
Department of Biotechnology Ministry of Science  
& Technology*

Dr. Renu Swarup Former Secretary, Department of Biotechnology Ministry of Science &

Technology, Government of India and the Former Chairperson of the Biotechnology Industry Research Assistance Council (BIRAC). She also held charge of Secretary, Department of Science & Technology for a short while. Dr. Swarup holds a PhD in Genetics and Plant Breeding and has completed a post-doctoral fellowship at The John Innes Centre, in Norwich, UK. Having spent over three decades at the DBT, Dr. Swarup has held various charges pertaining to policy planning and implementation and was instrumental in formulating multiple editions of the National Biotechnology Strategy. As the Founder Managing Director at BIRAC, she has promoted a vibrant ecosystem of innovation research by Biotech enterprises, focussing on translational research and industry-academia partnerships to support over 5000 startups and SMEs. A Fellow of the National Academy of Sciences (NASI) India, A Life Member of Trust for Advancement of Agricultural Sciences (TAAS) and a Member of the Organization for Women in Science for the Developing World (OWSD), she was awarded the “BioSpectrum Person of the Year Award” in 2012. “National Entrepreneurship Awards 2017”, TiE Women Enabler Award 2018, “Dr. P. Sheel Memorial Award” 2018 by NASI and the TWAS Regional Office Prize on Science Diplomacy in 2018. She has been awarded the Agriculture Research Leadership Award 2019, Smt. Chandaben Mohanbhai Patel VASVIK Award for Women Scientific & Chemical science & Technology 2020-21, Life Time Achievement Award for Biotech Policy maker—2021. She was also recognised as Business world women 2019 & 2020. She is also a recipient of Y B Chavan National Award 2021 for Public service. She received the Dr B S Bajaj Memorial FABIA Excellence Award-2023. She is currently the Vice Chair of the International Centre for Antimicrobial Resistance Solutions (ICARS) Copenhagen, Denmark and also a Member of the National Start up Advisory Council, Govt of India. She is also the Scientific Expert on the Advisory Boards of the International Pandemic Preparedness, Govt of UK; G7 Global Health Multistakeholder Group and the Chair of the Govt of India Expert Group on Preparedness for Future Pandemics



### **Keynote Address**

#### **Dr. Sanjay Kumar**

*Chairman, ASRB*

Dr. Sanjay Kumar, Chairman of the Agricultural Scientists Recruitment Board, New Delhi, previously served as Director of CSIR-Institute of Himalayan Bioresource Technology (CSIR-IHBT). His scientific achievements include discovering a carbon fixation pathway to boost photosynthetic efficiency, developing an autoclavable superoxide dismutase enzyme, and advancing understanding of secondary metabolism and adaptive mechanisms in plants. As director, Dr. Kumar championed initiatives addressing malnutrition, preserving traditional knowledge, conserving biodiversity, and promoting waste management. His team introduced high-value crops—asafoetida, saffron, monk fruit, Russian sea-buckthorn, apple, cinnamon, liquorice, liliun, and tulip—to non-traditional regions, promoting self-reliance in India. His promotion of aromatics made Himachal Pradesh a leader in wild marigold essential oil production. Dr. Kumar’s commitment to the bioeconomy launched startups, spurred a surge in technology transfers, and expanded entrepreneurial agreements to bring institute-developed products to market. His impactful leadership positioned CSIR-IHBT among India’s top research institutes, driving science-led societal progress.





### **Inaugural Address**

#### **Dr. Vinod K Paul**

*Member, NITI Aayog*

Dr. Vinod Paul served on the faculty of the Department of Paediatrics, All India Institute of Medical Sciences, New Delhi, from 1985 to 2020, and was Head of the Department for nearly a decade. He is a globally recognised medical scientist and a public health exponent.

Government of India appointed Dr. Paul as a Member of the National Institution for Transforming India, the NITI Aayog, in August 2017 where he leads the Health, Nutrition and Education verticals. He has played a pivotal role in formulating the Ayushman Bharat-PMJAY, the Ayushman Arogya Mandir scheme and POSHAN Abhiyaan.

Prof. Paul also served as the Chairman of the Board of Governors in supersession of the Medical Council of India in 2018-20. This tenure was recognised for a record increase in undergraduate and postgraduate medical seats and introduction of telemedicine guidelines, district residency scheme and a plethora of other reforms.

Dr. Paul has been a part of the core team of the Union Government for Covid-19 pandemic response. He chaired the National Task Force on COVID-19, the Empowered Group on Emergency Management Plan and Strategy, Empowered Group on Vaccination as well as the National Expert Group on Vaccine Administration for COVID-19 (NEGVAC).

Dr. Paul was conferred with the prestigious Ihsan Dogramaci Family Health Foundation Prize by

WHO at the 2018 World Health Assembly for his globally recognized service in the field of family health.

**November 26, 2024**

**Opening Session: Festival Theme Talk  
- (Affordable, Inclusive and Accessible  
Innovations Impacting Society)**



#### **Prof. V Ramgopal Rao**

*Vice-Chancellor for the Birla Institute of  
Technology & Science (BITS)*

Prof. V. Ramgopal Rao, Vice Chancellor of BITS Pilani campuses since 2023, previously served as IIT Delhi's Director (2016-2021) and as a Chair Professor for Nanoelectronics at both IIT Bombay and IIT Delhi. An internationally acclaimed Nanoelectronics researcher, he has published over 500 papers and holds 50 patents, including 20 issued US patents, with 15 licensed for commercialization. His group's joint IP with semiconductor industries is used in millions of ICs globally. Prof. Rao co-founded two successful deep technology startups, Nanosniff and Soilsens, at IIT Bombay. He has been elected Fellow of multiple prestigious academies and supervised 53 Ph.D. graduates. Prof. Rao has received over 40 awards and honors, both in India and abroad, including 3 honorary doctorates. He chairs various government of India committees on education and research matters.

**November 26, 2024**

**Session 1: An Enabling Policy Framework for  
Promoting Innovations**



**Dr. Dinesh Kumar Agarwal**  
*Registrar General, PPVFRA*

Dr. Dinesh k. Agarwal, Registrar-General at the Protection of Plant Varieties & Farmers' Rights Authority in New Delhi, boasts a rich background in crop improvement. Previously serving as Acting Director at ICAR-Indian Institute of Seed Science and Principal Scientist at ICAR-National Research Centre for Banana, he has contributed significantly to the release and notification of numerous crop varieties, including Fodder & Forages, Cotton, and Soybean. With nearly 100 research papers published in national and international journals and conferences, Dr. Agarwal is a respected authority in agricultural research and development.



**Ms. Anna Roy**  
*Principal Economic Adviser, NITI Aayog*

Ms Anna Roy is a 1992-batch officer of the Indian Economic Service. She was a lecturer at Delhi University and TERI before joining the IES. In the government she has worked in the Ministry of Finance, Ministry of Civil Aviation, and NITI

Aayog. She has held various positions like Deputy Director, Joint Director, Director in Department of Economic Affairs, Ministry of Finance and also Ministry of Civil Aviation during the period from 1996 to 2012. She was Officer on Special Duty to the Finance Minister and the Finance Secretary during 2009-2012. She has also served as Joint Secretary in the Department of Financial Services. She has worked in important sectors like Infrastructure reforms, public-private partnerships, the financial sector, and the banking sector.

At NITI Aayog she heads the frontier technologies /data management & analysis verticals. In this role, she has led teams, which have brought out major reports like the National Strategy on Artificial Intelligence, Blockchain- the India Strategy, Approach Paper on AIRAWAT, Responsible AI- Principles & Enforcement Mechanism, the Data Empowerment & Protection Architecture (DEPA) etc.. Ms. Roy also heads the Women Entrepreneurship Platform, a NITI flagship that works towards developing the entrepreneurial ecosystem for women.

**November 26, 2024**  
**Session 2: Promoting Product Innovation**



**Prof. Ashwani Pareekh**  
*Executive Director of National Agri-Food Biotechnology Institute*

Ashwani Pareekh is a standout figure in plant biology and education, renowned for his groundbreaking contributions in plant molecular biology and biotechnology. Currently serving as Executive Director at NABI (DBT), Professor at JNU and an Adjunct Professor at the UWA, Perth, his impact spans continents. Pareekh's accolades speak volumes about his prowess. He earned the

prestigious award for Technology Development from the President of India for his creation of Stress Tolerant Rice of the Next Generation (STRONG), poised to revolutionize rice farming and bolster farmers' incomes. His research group has also developed several transgenic and mutant rice plants with enhanced nutrition profiles and resilience to environmental stresses. Recognized with the Tata Innovation Award by DBT, the NASI-Reliance Platinum Jubilee award, and prestigious fellowships from NASI, INSA, and NAAS, Pareek's influence extends beyond academia. With over 20 PhDs guided, more than a dozen patents granted and close to 200 publications, his impact on scientific knowledge is profound. His research interests in xero-halophytic plants and developing rice resilient to multiple abiotic stresses demonstrate his commitment to addressing critical agricultural challenges. Ashwani Pareek's multifaceted achievements and unwavering dedication position him as a trailblazer, driving impactful innovation in agricultural biotechnology globally.



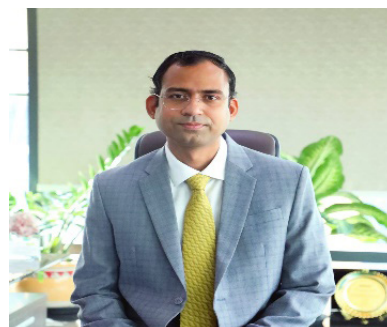
**Ms. Suman Gupta**

*Chief Operations Officer BBB*

Ms. Gupta is the Chief Operations Officer of the Bio-Incubator at Regional Center for Biotechnology which is an academic institution established by the Department of Biotechnology, Govt. of India under the auspices of UNESCO. She provides leadership to the Bio-incubator that nurtures the entrepreneurs in the area of Biotechnology and provides them the required mentorship to commercialize their ideas. She has been instrumental in setting up the state-of-the-art incubation facility that has supported more than 55 startups since its inception in Nov. 2018.

Bringing together grassroots and deep-tech innovations

Ms. Gupta has been a prudent Drug Discovery scientist, having over 20 years of rewarding association with premier multinational Pharma companies. She has played a key role in finding several clinical candidates leading to Investigational New Drug molecules. She is an experienced project manager and an expert in managing global collaborations. She is an alumnus of MSU, Baroda and Ruia college, University of Bombay.



**Dr Jitendra Sharma**

*MD and Founder CEO, Andhra Pradesh MedTech Zone (AMTZ)*

Dr. Jitendra Sharma is the Managing Director & Founder CEO of Andhra Pradesh MedTech Zone (AMTZ) which is World's largest medical devices research and manufacturing park. He is Founder Executive Director of Kalam Institute of Health Technology (KIHT) - that serves as medical technology policy institute to various departments & ministries of Govt. of India. He is Founder Chairman of two med-tech incubators - Medi-Valley, and Bio-Valley and Chairman of Indian Biomedical Skill Council. He is adjunct lecturer at University of Adelaide, Australia and Professor of Practice in Indian academic institutions; His work experience includes those at AIIMS, New Delhi, World Bank, Niti Aayog, National Health Systems Resource Centre and World Health Organisation. Dr Sharma has been Awarded the European Union-India Award at EU Parliament, Brussels; AAMI-Laufman Greatbatch Award and American College of Clinical Engineering Excellence Award for his distinguished work in medical technology sector. He has three academic PhDs and is author of book- "Made in Lockdown".





**Dr. Rohit Srivastava**

*Himanshu Patel Chair Professor in the Department of Biosciences and Bioengineering, IIT Bombay*

Prof. Rohit Srivastava is well recognized for his translation research in the field of Biosensors and affordable Point-of-care diagnostic technologies for rural and maternal healthcare. The Vigyan Shri, Dr Shanti Swarup Bhatnagar Prize, INAE Fellowship, the Dr Abdul Kalam Technology Innovation National Fellowship, NASI Fellowship, the Shri Om Prakash Bhasin Award for Excellence in Health and Medical Sciences etc are examples of Prof Srivastava's accomplishments in the last 19 years. In his career at IIT Bombay, Prof. Srivastava has graduated 50+ PhD students, 90+ M.Tech students and supervised around 200+ research interns. He has published in 300+ reputed journals publications with an h-index of 48, has been granted 85+ Indian and US patents, and additionally filed about 150+ patents, trademarks and IDFs. He has setup 10+ startups and has also mentored 25+ Medtech start-ups in last ten years and helped them to secure grants and developed innovative solutions for healthcare.



**Dr Suphiya Khan**

Deputy Director, Shriram Institute for Industrial Research

Dr Suphiya Khan is currently the Deputy Director at the Shriram Institute for Industrial Research in Gurgaon, where she is establishing a new Center for Research and Innovation. She also serves as a Professor at Banasthali Vidyapith and is the founder of Drumlins Water Technologies Pvt. Ltd. Driven by a passion for science and education, Dr. Khan is a bioentrepreneur dedicated to empowering women scientists. She has received numerous national and international awards, including the Chevening Research Science and Innovation Policy (CRISP) fellowship at the University of Oxford in recognition of her contributions to science and innovation. Other accolades include the TIE-BIRAC WInER award with a cash prize of 5 lakh, NASI-Reliance Industries Platinum Jubilee Awards 2021, the Women Transforming India Award Top 30 in 2019 by NITI Aayog, the TIE Women Runner-Up in Rajasthan, and the Wonder Women in STEM award.

Dr. Khan is pioneering the development of water technologies that are now being commercialized through her startup and various industries. Her vision is to create affordable and safe water technologies while fostering employment opportunities for women. As a scientist, educator, and entrepreneur, she is charting a unique path to support women scientists in becoming entrepreneurs—a journey that is rarely pursued.



**Dr. Vanita Prasad**

*Revy Environmental Solutions*

Dr. Vanita Prasad - a scientist turned into an Entrepreneur, is a New Age Environmental Instrumentalist providing Biotech solutions. Having 30+ years of experience in the anaerobic digestion market she has floated her own

company REVE Environmental Solutions Pvt. Ltd. With her expertise in intracellular genomics of microbes, curated products and innovative services, the firm has so far helped commission/re-commission several biogas and wastewater treatment units. She is a BRICS women awardee and honored to have interacted with President of India, Smt. Draupadi Murmu for her innovation which can change the future making it greener. Her patented technology is acknowledged globally and both Dr Vanita Prasad and her company has received various awards and accolades at National and International level alongside being invited to speak at various events in Biotech, Cleantech and Environmental domain. Her company REVE is progressing well and has served more than 100+ clients PAN India.



**P. V. Madhusudhan Rao**

*Departments of Mechanical Engineering and Design, IIT Delhi*

P. V. Madhusudhan Rao is a professor in the Department Design at IIT Delhi. He is a co-founder of the Assistech lab and coordinator of the IIT Delhi Design Innovation Center (DIC). He was a guest researcher to US government's National Institute of Standards & Technology (NIST, USA) five times. He was visiting scientist to Massachusetts Institute of Technology and visiting faculty to Stanford University.

He has several patents and design registrations to his credit, many of which have been commercialized. He also serves as founder, board member and scientific advisor of many start-ups

Bringing together grassroots and deep-tech innovations

and technology business incubators.

He is a fellows of ASME. He received the Abdul Kalam Technology Innovation National Fellowship of INAE and IIT Delhi's K. L. Chopra Faculty Research Award. He has been conferred with the 2005 Vasvik Industrial Research Award and has twice received a National Award from the Ministry of Science & Technology.



**Dr. Manish Diwan**

*Head - Biofoundry, NCR Biotech Cluster & IVCOL at BIRAC*

Dr. Manish Diwan is leading major national programs aimed at advancing the Government of India's initiatives to foster and strengthen the Biotech Innovation Ecosystem. He serves as the sectoral lead for key national missions, including Startup India and Make In India. He plays a key role in driving policy reforms, fostering strategic collaborations, and building international partnerships.

He has about 27 years of global R&D experience in Pharma/ Biotech sector from discovery research to product development, Science Administration and Project Management for Industry and Academia.

He also leads major national initiatives and programs at BIRAC, supporting startups, entrepreneurs, and industry development. He contributed to several Clinical Drug Candidates for global drug development at Daiichi Sankyo (India), Daiichi Sankyo (Japan), Ranbaxy, Dabur and University of Alberta (Canada).

As a central enabler, he plays a key role in identifying gaps within the ecosystem and

developing effective solutions. His contributions include several policy initiatives such as establishing Technology Clusters with pilot and manufacturing facilities for startups, facilitating field validation for startup solutions, providing access to regulatory guidance, and promoting scaling and global integration through a strategic network of national and international partnerships. He supports technology-driven startups, entrepreneurs, incubation centers, and knowledge clusters across academia and industry, helping them address unmet needs in sectors like healthcare, medical devices, diagnostics, industrial biotech, agriculture, waste management, clean energy, and more. This is achieved through the development of innovative, globally competitive products and technologies.

**November 26, 2024**

### **Session 3: Commercialising Products, Penetrating Markets**



**Dr. Markandeya Gorantla**  
*ATGC*

Dr. Markandeya Gorantla is the Chairman and Managing Director of ATGC Biotech Pvt. Ltd., a company he co-founded to transform agriculture through sustainable and eco-friendly technologies. With over 26 patents, Dr. Gorantla is recognized for pioneering pest management innovations, including his “Insect Family Planning” approach, which minimizes harmful pesticide reliance.

As a founder of the Whale Tank Faba Life Science Fund, he is investing in deep tech solutions, including drug discovery and novel therapies. His

ventures include Bharath Advanced Therapeutics (BAT), where he is developing a potential cancer drug that shows complete cancer regression in AML and CML in vivo models. As Chairman of Utopia, Dr. Gorantla leads efforts on a vaccine achieving 60% efficacy within 15 days for triglyceridemia, obesity, and fatty liver.

Additionally, he invests in biocatalytic technology that transforms sugar into prebiotics, providing a healthier alternative. A Rockefeller Fellow with a Ph.D. in Plant Biotechnology from the University of Hyderabad, Dr. Gorantla’s work continues to inspire impactful innovations in biotechnology and sustainable agriculture.



**Mr. Sachin Dubey**  
*Co-Founder & CEO, Module Innovations*

Sachin is a Nanotechnologist and a med-tech innovator with experience in developing diagnostics for human diseases. He is the Co-Founder and CEO of Module Innovations working on precision diagnostics for infectious diseases and Antimicrobial Resistance (AMR). He has been the project leader for several healthcare Innovation projects funded by DST-GoI, DBT-GoI, BIRAC, Nesta-UK, BMGF, Grand Challenges Canada (GCC), Titan, Tata Trusts and CARB-X, USA. Under his leadership, Module Innovations became the first and only diagnostic company in Asia to receive backing from CARB-X. As an active innovator Sachin holds several patents on technologies in healthcare innovations. Sachin was accorded as top 10 Innovators of India by India Innovations Growth Program (IIGP 2.0) in 2017. With a B.Tech and M.Tech in Nanotechnology, Sachin is a Chevening CRISP Fellow from the University of Oxford, UK





**Dr. Hasmukh Rawal**

*Managing Director and Co-Founder, Mylab*

Mr. Hasmukh Rawal is the Managing Director and co-founder of Mylab Discovery Solutions. Hasmukh is a biotechnologist-turned-entrepreneur and holds a postgraduate degree in medical biotechnology. Hasmukh has deep experience in the commercial development of applied molecular diagnostics solutions. He drives product strategy and new innovations at Mylab. He also closely manages the interface with the external stakeholders. He has deep understanding of the Indian diagnostics market with close association with major industry players and academic and research institutes in the country. He is an avid cricket player and loves to travel.



**Mr. Arpit Dhupar**

*CEO-Dharaksha Ecosolutions*

Mr. Arpit Dhupar is a mechanical engineer by training and firmly believes that every innovation must be supported by a solid business plan to reach a wider audience. He views technology as a powerful enabler in addressing some of the most significant challenges faced by society today.

He is focused on developing a technology that transforms crop stubble waste into biodegradable

Bringing together grassroots and deep-tech innovations

packaging material. His areas of interest include sustainable production methods, renewable energy, pollution reduction technologies, and farm mechanization.



**Dr. Arun Chandru**

*CTO & Director, Pandorum Technologies Pvt. Ltd.*

Arun has a background in academia where he studied technical management, advanced manufacturing processes, and solid rocket propulsion. He met Tuhin while doing his PhD at IISc, and as a result of their meetings, their shared thoughts and the idea for Pandorum Technologies evolved.

The “Forbes Asia Under-30 2016 - Healthcare and Science” list includes Arun.

**November 26, 2024**

**Session 3 (ii) Opportunities for mobilising investments**



**Ms. Padmaja Ruparel**

*Co-founder IAN Group, Founding Partner, IAN Fund 1 & Sr. Managing Partner, IAN Alpha Fund*

Padmaja Ruparel is nationally recognized as a key player in the Indian entrepreneurial ecosystem

and has helped co found many of the relevant institutions, besides being an active Angel investor herself. Her operating experience spans large corporates, M&A, and startups/early stage companies. She has been recognized in several “Most Power Women” lists for several years and repeatedly, by Fortune India, Forbes India and Business Today. The Women Economic Forum recognized her with its “Women of the Decade in Investment Banking” award. She is Co Founder of Indian Angel Network (IAN), India’s single largest horizontal platform for seed and early stage investments. IAN is the first and now possibly one of the world’s largest group of business angels, comprising the who’s who of successful entrepreneurs and dynamic CEOs from India and overseas. She built IAN from inception, making it within 18 years a unique institution globally, with over 500 investors across 10 countries and a portfolio of over 225 companies in 7 countries, spanning 19 sectors. She operationalised IAN’s international operations in London, launching it from 10 Downing Street, making it the only angel group in the world to set up operations outside of its home country. Padmaja is the Founder of BioAngels, India’s only sector focused angel investor group, in partnership with BIRAC, the innovation arm of the Department of Biotechnology, Govt. of India. BioAngels is the first angel investor group in partnership with any government body, world wide – an innovative public – private partnership, bringing deep engagement in the Healthcare & Cleantech sectors and has herself led several early stage investments in the space.



Ms. Rema Subramanian  
*Co-Founder and Managing Partner of Ankur Capital Fund*

Rema Subramanian is the Co-Founder and Managing Partner of Ankur Capital Fund, Investing in transformative technologies for the next billion. A pioneer investor in early stage agritech, they invest across agritech, health and other enabling technologies for aspiring Indians. They go the extra mile to identify and nurture such entrepreneurs.

She cofounded Ankur with a vision to use her three-decade CXO and entrepreneurial experience to give young startups the tools to become game changers. She has worked across manufacturing, IT/ITES, and edtech, taking young companies from scratch to midsize ventures. Having worked with both Indian and Global companies, she intends to bring her experience to scale these enterprises.



**Dr. Mansi Aggarwal**  
*Partner at Alkemi Growth Capital*

Dr. Mansi Aggarwal, a doctor by education, is a pivotal figure in the Indian venture capital ecosystem. With a life science-focused MBA from Cambridge, UK, Mansi brings a unique blend of medical expertise and business acumen to her role as a partner at Alkemi. Prior to her tenure at Alkemi, Mansi gained significant investing experience and entrepreneurial insights through her venture Transferlife, where she spearheaded innovative solutions tailored for the healthcare sector. Her multifaceted background and diverse skill set make her a valuable asset in identifying and nurturing promising ventures within the healthcare and consumer wellness space

November 27, 2024

#### Session 4: Masterclass on IP and Technology Management



#### **Dr Shirshendu Mukherjee**

*Managing Director, Wadhawani Innovation Network (WIN), Wadhawani Foundation*

Dr. Shirshendu Mukherjee, trained as a Medical Microbiologist brings around 3 decades of experience in academic institutes, Pharma companies and decade long experience in national, international philanthropic and Government funding agencies and has been instrumental in supporting the innovation ecosystem in India and beyond. Dr. Mukherjee was the Mission Director of the Grand Challenges India, the flagship program of the partnership between the Department of Biotechnology, Ministry of Science & Technology, Government of India, the Bill & Melinda Gates Foundation and Wellcome Trust. This platform supports initiatives that could dramatically change the health and development landscape in India. He was also leading the Intellectual Property (IP) & Technology Transfer (TT) and Communications Division in BIRAC. Dr. Mukherjee also lead the NBM (National Biopharma Mission) a joint initiative of World Bank- Department of Biotechnology (DBT)..He was also the head Mission Covid Suraksha which spearheaded the covid vaccine development a initiative of Government of India. Dr. Mukherjee holds Ph.D. in Microbiology, Law graduate, leadership course form Said Business school university of Oxford and Global Health Leadership course from London School of Health & Tropical Medicine (LSHTM). Dr Mukherjee is also a Registered Technology Transfer Professional (RTTP) certified by the Alliance of

Technology Transfer Professionals (ATTP) and is an Honorary Scientific Advisor to the Indian Patent Office. Dr Mukherjee is also the Country Ambassador in India for the Royal Society of Tropical Medicine & Hygiene (RSTMH). He is also the General Secretary of the Society for Technology Management professionals (STEM).

Presently Dr Mukherjee, the Managing Director, of Wadhvani Innovarion Network (WIN), Wadhvani Foundation, which is a transformative initiative designed to fuel innovation and Academic Research and building a global network of innovation centers of excellence (WIN-COE), turning groundbreaking academic research into real-world solutions. Apart from crucial funding and mentorship to interdisciplinary research projects, this transformative initiative is set to revolutionize academic innovation and fast-track the commercialization of multidisciplinary academic research into influential products, processes, services and startups.



#### **Dr. Malathi Lakshmikumar**

*Executive Director & Practice Head Patent Agent*

Dr. Malathi is an Executive Director and heads the IP division of the firm ( Lakshmikumar & Sridharan, attorneys). She served as the Head, Centre for Bioresource & Biotechnology Division in The Energy and Resource Institute (TERI) for a period of 17 years. She has more than 30 years of experience in the field of biochemistry and Molecular Biology with an expertise in plant genomics, DNA fingerprinting and genetic transformation. She has successfully supervised several Ph.D. students in the area of Plant Molecular Biology. She has more than 100 publications to her credit in various International



and Indian journals. She is Listed as Patent Leaders in WIPR for Patents and is Recognized as Individual Expert in Patent Prosecution in IAM PATENT 1000 for the years 2016, 2017, 2018, and 2019. She is a Member of AIPPI (Biotech Committee), Secretary of AIPPI (India) , Member of FICPI , and also Member of APAA. She has been awarded as recognized Top Women Entrepreneur , Recipient of the National Science Talent Scholarship , Recipient of the prestigious Fogarty Visiting Research Associateship from the National Institute of Health, Bethesda, USA in 1984-85 . She has won Recipient of the National Young Women Scientist Award by the Department of Biotechnology in March 2000 Ranked in Chambers-Asia Pacific 2017 and 2019



**Pushpa Vijayaraghavan**

*Director – Healthcare & Lifesciences advisory, Sathguru Consultants*

Pushpa Vijayaraghavan leads the healthcare advisory practice at Sathguru Management Consultants. Pushpa advises Governments on policy as well as leading companies on strategy and innovation access. Pushpa has been involved in shaping marquee projects globally such as the National Biopharma Mission in India and vaccine manufacturing capacity development in Sub Saharan Africa.

She is a Registered Technology Transfer Professional (RTTP), an MBA from the University of Michigan (including a certificate in innovation policy), an undergraduate degree from Osmania University and is a member of the Institute of Chartered Accountants of India.

She serves on the Governance Board of the Medicines Patent Pool, a UN founded body to enable access to medicines in LMIC. Pushpa has been an active member of the CII National Committee on Biotech and Pharmaceuticals, is on the BioNest funding committee of BIRAC, Department of Biotechnology, and was recognized as one of the twenty ‘Women Leaders in Healthcare’ in India in 2018 by Medgate Today.

**November 27, 2024**

**Session 5: Scaling Innovations — Technology Deployment in States and different locations**



**Dr. Mrutyunjay Suar**

*Director General R&D and Innovation, KIIT University*

Entrepreneurial professor with Masters in Marine Biotechnology from Goa University, PhD in Molecular Microbiology from University of Delhi in 2003 and Postdoc at ETH Zurich, Switzerland. He returned to India and established the School of Biotechnology in 2007 under KIIT University in Bhubaneswar. To promote technology and innovation, he also established KIIT-Technology business incubator (KIIT-TBI), promoting deep tech start-up companies. He is a strong promoter of technology for all and works especially in the sector of public health innovation and technology development. Under his leadership, KIIT-TBI nurtured more than 200 start-up companies and created almost 4000+ jobs and established Centre of Excellence, supported by DST, GoI. He is committed to replicate the successful incubation model in other states of East and North East

regions of India, for which BIRAC has established the BIRAC Regional Centre @KIITBTBI focusing on East and North East states of India. He also founded two companies and has a very active research group in the area of Salmonella biology and nano-biomaterials and published more than 100 research articles and filed 4 patents.



**Dr. Jatinder Kaur Arora**

*Former Executive Director, Punjab State Council for Science & Technology | Member Secretary, Punjab Biodiversity Board*

Motivational Speaker. Former Executive Director of Punjab State Council for Science & Technology; the apex body for promotion of Science & Technology in the State of Punjab as technical arm of Department of Science, Technology & Environment, Govt. of Punjab and State Level node of Department of Science & Technology, Govt. of India. Also served as Member Secretary, Punjab Biodiversity Board and Chief Executive Officer, Punjab Research & Innovation Council. Spearheaded multifarious initiatives for women empowerment and rural development the tech-interventions . Developed State Action Plan on Climate Change 2.0 of Punjab, India. Steered Mission Innovate Punjab to synergize and augment Science Technology & Innovation Ecosystem in Punjab, India. The President of India conferred upon her ‘National Award for Women’s Development through application of Science & Technology’ instituted by Ministry of Science & Technology, Govt. of India for her extensive work towards women empowerment. Govt. of Punjab has awarded her ‘Punjab Sarkar Parmaan Patra’ for exemplary service in the field of Science & Technology. The Indian Television Academy has honored her with

‘Gr8 Women Award’ in Science & Technology category. As a result of her efforts for promotion of cleaner technologies, UNDP and Govt. of Punjab have conferred Punjab State Council for Science & Technology with SDG Action Award 2020 for Environment Sustainability. She is leading Punjab State Climate Change Knowledge Centre and developing State Action Plan on Climate Change 2.0. She is also supporting innovators on all aspects of IPR protection. A Ph.D in Microbiology, she also served Punjab Agricultural University.



**Dr. Chitra Pattabiraman**

*SPO Health Innovations, BMGF*

Dr. Chitra Pattabiraman is Senior Program Officer, Digital, Health Innovations & AI, India Country Office, Bill & Melinda Gates Foundation. She has trained as a virologist/molecular biologist who uses genomic tools (sequencing) to identify pathogens. She obtained her Integrated MSc-PhD in Life Sciences from National Centre for Biological Sciences, TIFR Bengaluru. Dr. Pattabiraman has received the SERB-Royal Society Newton International Fellowship and the India Alliance Early Career Fellowship, for her postdoctoral work on brain infections. Her research was conducted in collaboration with the University of Liverpool and the MRC Centre for Virus Research in Glasgow, UK, while based at the National Institute of Mental Health and Neurosciences (NIMHANS), India. From 2020 to 2023, she contributed to the genomic tracking of SARS-CoV-2 variants. She has consulted with multiple organizations on projects related to surveillance of infectious diseases, early product development for infectious disease diagnostics



and analyzing genomic data of pathogens, with a focus on India.



**Mr. Partha Ghosh**

*Program Lead, Social Alpha*

Mr. Partha Ghosh leads financial services sector initiatives at Social Alpha. His works entail

unlocking commercial finance and enhancing the adoption of climate-smart technologies in agriculture value chains using innovative financing mechanisms and instruments.

Mr. Ghosh has more than fifteen years of experience in the financial services and International Development sectors. He has seven years of experience managing agriculture, SMEs, and microfinance loan portfolios worth USD 85 million. During his stint with the financial services sector, Mr. Ghosh has successfully structured a suite of innovative debt and mezzanine finance products. As a consultant in the International Development sector, he has managed diverse projects across Africa and Asia.

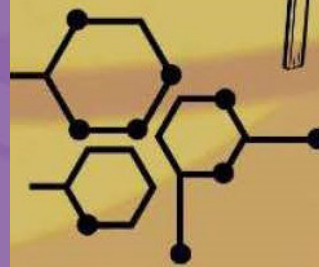
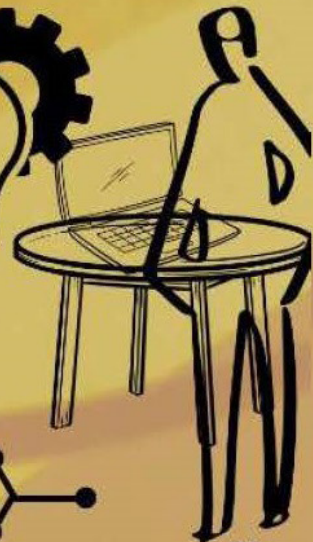
In the last fifteen years, Mr. Ghosh has supported the development and implementation of innovative ideas to confront challenges in the International Development sector.

## Sponsors



## Associate Partners





# Deep-tech innovations

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## AGNI



**Sahil Mehta**  
Co-Founder and CTO  
Lattice Innovations



### Problem Addressed

Primary and community healthcare do not have robust digital systems that are designed to work in a resource-limited environment. Digital health systems are often designed for administrative convenience, rather than to assist those working at the frontline. Existing solutions do not adequately address the need for mobility, responsiveness, offline support and interoperability.

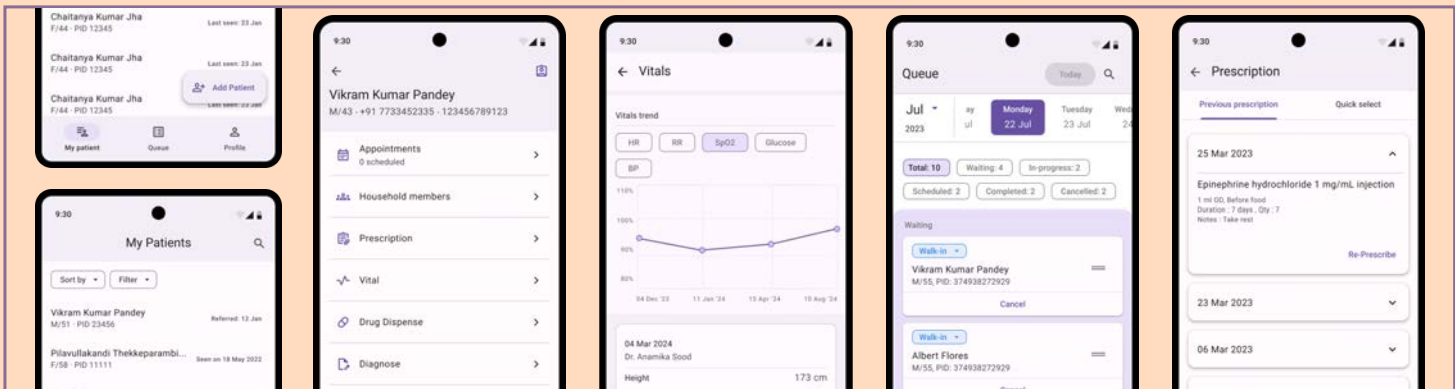
### Technology

Agni is a mobile-first system that:

1. Is designed for offline use,
2. Is being developed for Android, iOS and web browsers,
3. Is built on HL7® FHIR®, with out-of-the-box interoperability, and can connect with DHIS-2 and other dashboards, and
4. Aggregates data aligned with sustainable development goals (SDGs).

The system utilizes the WHO's PEN protocols for cardiovascular disease (CVD) risk assessment. While Agni focuses on cardiac health today, it is extensible to a broad range of communicable and non-communicable diseases, as well as reproductive, maternal, neonatal and child health (RMNCH).

Our vision of a digital system is one that connects all three key actors — beneficiaries, care providers, and public health agencies. To bring this vision to life, we have invested in a modular and scalable technical architecture.



### Societal Impact

Adopting HL7 FHIR interoperability in India enhances patient care by providing comprehensive health records, streamlines healthcare workflows, reduces costs, and empowers patients with better access to their information. It also supports public health monitoring and fosters research and innovation by enabling real-time data sharing and standardized data aggregation. Overall, it contributes to a more efficient, effective, and patient-centered healthcare system.

### Current Status

We are currently moving to the late stage of validation. The solution is going to be piloted in multiple sites over the coming months as we prepare for technology commercialization. We are also in talks with Ministries of Health of countries the Pacific Islands to potentially implement Agni for their primary health systems.





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## MSO KAFO



### Mechanically Stable Orthosis (MSO) Knee Ankle Foot Orthosis (KAFO)



**AUMEEESH TECH**  
*stepping towards a better future*

### Problem Addressed

Over 13 million in India people suffer from various locomotor disabilities, of which 4 million have been afflicted by polio. The present KAFOs provide stability during walking by locking the knee joint in a fully extended position during both stance and swing phases. This results in excessive energy consumption and induces abnormal gait events such as circumduction, hip hiking, and vaulting during gait. Walking with conventional KAFOs can also lead to premature exhaustion during ambulation, as well as limited mobility, pain, and a decreased range of motion (ROM) in lower limb joints. It has been reported that using a conventional KAFO reduces gait efficiency by 24%, increases vertical displacement of the center of mass (COM) by up to 65%, and also increases energy expenditure.

A conventional Knee-Ankle-Foot Orthosis (KAFO) locks the knee during both the stance (load-bearing) and the swing (ground clearing) phase of walking which results in unnatural and tiring gait. Most of the existing devices are bulky, expensive and do not meet the needs (squatting, cross-legged sitting and ease of maintenance) of people in India. Moreover, their availability is limited to the western countries.

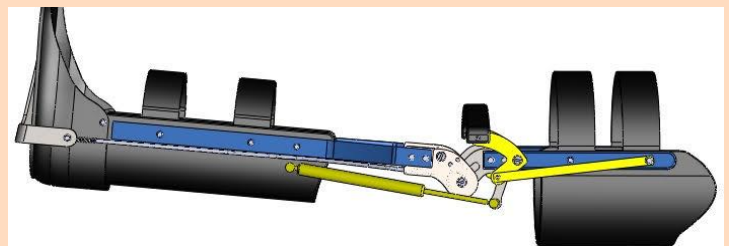
### Technology

We propose a unique solution that addresses the basic need for locking and unlocking of the mechanism according to the stance of the user. The MSO (Mechanically Stable Orthosis) KAFO (Knee Ankle Foot Orthosis) is an assistive device and focuses on providing a better alternative to the existing orthotic calipers by automatic locking and unlocking of the knee joint according to the stance and swing phase of the user to provide lower limb stability.

The MSO also includes shocker which provide an extra boost to straighten the leg as the person walks and also helps to keep the leg straight while standing.

The C-clamp in MSO helps to apply adequate pressure on the knee to keep it in place while standing and walking for better stability.

The proposed solution is light weight, comfortable and intuitive to operate. The core mechanism consists of a pawl and ratchet mechanism that locks on heel strike and unlocks when heel is not in contact with ground.



### Societal Impact

About 30 % people that have locomotory disabled require advance technology or dynamic KAFO which costs in the range of lakhs per KAFO which is not affordable for a normal person.

Our Motto is to coordinate with govt & NGO to provide our product to the less fortunate people.

Dynamic caliper are not available in NGO and government bodies for patients, dynamic caliper are available in private sector but are very costly and many people cant afford to buy it.

### Current status

Patent Granted for MASC KAFO  
Patent for MSO Under Examination.  
Sold over 100 KAFO till date.

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## FIELD SATHI (Team: Agro Safe)

ANUGYA YADAV  
JAYPEE PUBLIC SCHOOL, NOIDA

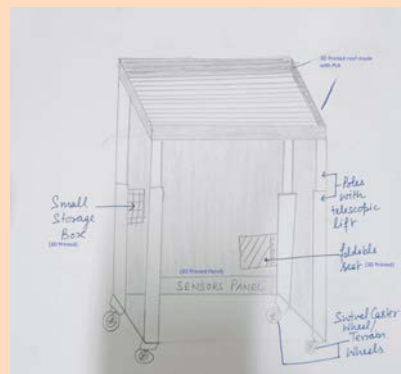


### Problem Addressed

Farmers often face harsh weather conditions, including extreme heat and rain, while working in the fields. These conditions can lead to health issues, reduced productivity, and increased discomfort, affecting their overall wellbeing and efficiency. Traditional methods of seeking shelter are impractical and disrupt the workflow. There is a pressing need for a solution that provides continuous, portable protection from the elements, ensuring that farmers can work comfortably and safely without interruptions.

### Technology

- Ultrasonic Sensors /motion Sensors to follow the farmers
- Solar panels to reduce carbon footprints.
- Telescopic lifts to adjust the height of the shelter.
- Foldable seat
- Lithium Ion Batteries
- Sivel Caster or all terrain wheels
- 3D Printed Tool storage compartments, small water tank



### Societal Impact

- Improved farmer health & safety.
- Increased productivity & efficiency.
- Enhanced Sustainability.
- Empowerment of rural communities.
- Promotion of Green technology in agriculture.
- Contributions to rural employment.
- Alignment with SDG Goals like Goal 8: Decent Work & Economic Goals, Goal 3: Good Health & well being and Goal 13: Climate Action

### Current status

Prototyping Stage

QR Code



Anugya Yadav

[yadav.anugya@gmail.com](mailto:yadav.anugya@gmail.com)

Contact: 8010331764, 8010208779



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

Breast Cancer Treatment without Surgery & Radiation in an OPD, A Bloodless Procedure



## NUTAS



(A Non Invasive HIFU with Beam & AI Based Technology)  
 Founder: Ashok Arora with Team of Doctors, Research Associates

### Problem Addressed

The future of Surgeries to treat various Tumors belongs to USgHIFU (NUTAS)  
 ANY CANCER SURGERY DOES LEADS TO METASTASIS  
 (Source TMH, Mumbai, Spread of Cancer in the Body after Surgery)  
<https://www.news-medical.net/news/20180412/Breast-cancers-mre-likely-to-spread-after-finds-study.aspx>, <http://stm.sciencemag.org/content/10/436/eaan3464?rss=1>

NUTAS TECHNOLOGY CAN BE USED TO TREAT LARGE NO. OF WOMEN DIAGNOSED TO BE SUFFERING FROM UTERINE FIBROIDS, FIBROADENOMA & BREAST CANCER PATIENTS, Etc. IN AN OPD ITSELF, UNDER L.A.  
 (For 100% Breast Conservancy & Femininity of a Woman)

IT IS IDEAL TO TREAT IN EARLY / NON METATASIS WITH A CURATIVE EFFECT OF 98.4% AND IT BURNS /KILLS THE CELLS IN ONE SESSION, WITH CELL DEATH OF TISSUES AND COAGULATIVE NECROSIS HAPPENS WHICH IS CONFIRMED TO THE PATIENT AFTER 15 DAYS WITH ULTRASOUND CONTACT AND IS EQUIVALENT TO SURGERY. IT IS A GOLDEN STANDARD OF TREATMENT IN MEDICINE. IT CAN ALSO BE USED IN OTHER ADVANCED STAGES AS A PALLIATIVE TREATMENT ALONG WITH NEO-ADJUTANT THERAPIES FOR COMPLETE CURE, AS SURGERY TOO IS A PALLIATIVE TREATMENT IN ADVANCED STAGES TO TREAT, & THE RESIDUAL TUMOR IS ABSORBED BY THE BODY ITSELF & MORE THAN 300 BREAST CANCER PATIENTS WERE TREATED SUCCESSFULLY

The NUTAS Centre in DELHI was inaugurated by the Former DGHS Dr. Jagdish Prasad in March, 2014

### Technology

NUTAS - A SUPER KNIFE BEAM TECHNOLOGY

A SUPER KNIFE HIFU device has been upgraded to from Mosaic Multi-Array- Element Focused Ultrasound Transducer with good focusing property to SUPER KNIFE BEAM HIFU THERAPY in DELHI itself at NUTAS Breast Conservancy Therapy Centre, situated at GD-21 Pitampura, Delhi-110034, between April, 2014 to August, 2019 by team of Doctors, IT Professionals, Physicists, etc. from India, Japan and China, to a spherically focused phased array transducer for ultrasonic image-guided hyperthermia

#### Methods

A spherical array with a rectangular imaging opening Basic design parameters-Among the system configurations available for ultrasonic image-guided focused ultrasound therapy, a combined system containing a commercial imaging array and a custom designed therapeutic array was chosen for its capability of providing both the high quality imaging and the customized therapeutic performance. The therapeutic array was defined by a spherical shell (due to its inherent beam focusing ability) with flat circular elements. It can also be used in treating tumors in Liver, Kidney, Pancreas, Bone, etc.



A Gift of Beauty and Hope



After losing a breast to cancer, countless women have shared that the experience is equivalent to losing your femininity all at once, leaving patients to deal with issues of body image and self-esteem. But simple sensitive acts of care and kindness can help. This is the focus of The Breast Cancer Feeling Beautiful Again Project.

#### ADVANTAGES:

NO SURGERY, NO G.A., NO / MINIMAL HOSPITALIZATION, NO RADIATION, NO SCAR, NO BLEEDING, NO SIDE EFFECTS, NO POST OPERATIVE CARE, HARMLESS TO THE SURROUNDING HEALTHY TISSUES, NO REMOVAL OF BREAST & RE-CONSTRUCTION COST, NO LOSS OF LIMBS & ORGANS, CAN BE TREATED FURTHER WITH CHEMO / HORMONE / D.C. / IMMUNO THERAPIES, Etc. BY ONCOLOGISTS FOR COMPLETE CURE

NUTAS System is ready for commercialization & to Make in India, etc.  
[www.facebook.com/nutascentre](http://www.facebook.com/nutascentre)

NUTAS TREATMENT IS EQUIVALENT TO SURGERY

**WORLD'S 1st ROBOTIC NON SURGICAL DEVICE FOR TREATING BREAST CANCER WITH A CUTTING EDGE HIFU TECHNOLOGY**

TREATED WOMEN THANK YOU BREAST CANCER FEELING BEAUTIFUL AGAIN PROJECT

Now: Cancerous Tumors in Breast can be Treated in O.P.D. Women Can Say No To Chemotherapy & Mastectomy

Immediate Return To Normal Routine and No Disturbance of Limbs & Organs

No Surgery, No General Anesthesia, No Incision, No Bleeding and No Hospitalization

NUTAS, Breast Conservancy Therapy Centre GD - 21 Pitam Pura, Delhi - 110034 M : 9810284657, 9858047250  
[www.nutas.in](http://www.nutas.in), [facebook.com/nutascentre](http://facebook.com/nutascentre) & You tube Links, E-mail : [infonutas@gmail.com](mailto:infonutas@gmail.com)

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

The team



## Electroluminator

**BioSynnovation Technologies**  
School of Sciences, JAIN (Deemed-to-be University)  
Bengaluru, Karnataka – 560027

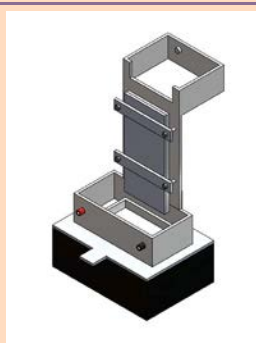


### Problem Addressed

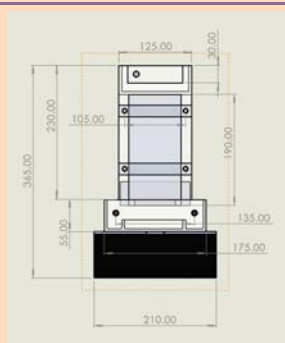
Molecular researchers often use electrophoresis on a day-to-day basis to separate and visualize DNA/RNA/proteins. This procedure requires the researcher to setup horizontal/vertical gel electrophoresis units, run the samples, and visualize the bands under UV/epi white illumination. To observe the bands, the user is often required to scoop the gel(s) and carry them to a dark chamber where the transilluminator is placed. During transit, the researcher could drop the gel(s) or cross-contaminate the samples, thus causing significant losses. A simple hack that can solve this issue is to integrate the electrophoresis and the transilluminator units into a single instrument, which eliminates the need to transport the gel from one place to another. Further, the provision of a staining cabinet in the device simplifies the process of staining polyacrylamide gels, eliminating the need for a separate rocker. These provisions have been made available in our patent-pending product "Electroluminator", designed to provide convenience to the researcher.

### Technology

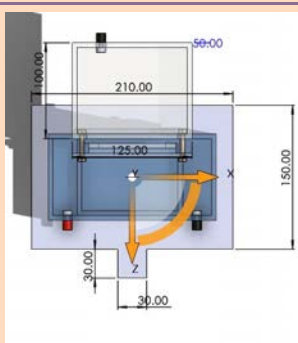
The Electroluminator is an instrument that combines the operational units of the vertical and horizontal gel electrophoresis with a UV/epi white transilluminator. The instrument can be operated in dual modes: One, it functions like a conventional horizontal electrophoresis unit, where the prepared DNA/RNA samples are loaded and electrophoresed. Post electrophoresis, the samples can be visualized just by pressing a button, which turns on the UV transilluminator to visualize the samples. Two, where a simple attachment of the vertical electrophoresis tank setup will convert the setup into a PAGE unit, wherein the top and bottom tanks are connected *via* the acrylamide gel. Post electrophoresis, the gel cast can be detached and the gel can be placed in a tray (provided along with this setup, which can be attached on top of the horizontal tank). The gel can thus be stained *via* silver staining or Coomassie Blue by placing the tank setup (the horizontal tank containing the tray with the gel placed in the staining solution) on any gel rocker unit. The UV lights herein can be easily replaced with fluorescent tube lamps to enable accurate visualization.



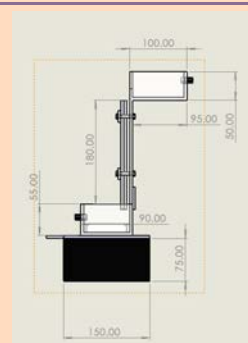
Isometric view



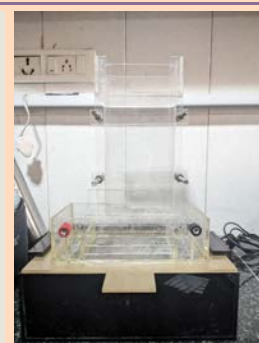
Front view



Top view



Side view



Product prototype

### Societal Impact

This instrument is quintessential in every molecular biology laboratory and research lab across the world. It provides convenience to the researcher and labs looking to minimize workload, reduce time requirements, cut the cost of procurement, and optimize space utilization. The device's design also allows easy transportation to remote areas where *in-situ* experiments are conducted. In a nutshell, the Electroluminator is a valuable tool for molecular research, offering efficiency, affordability, and convenience.

### Current status

- Patent filed (No.: 430753-001)
- Product validation completed
- Excited positive feedback from industry personnel
- Looking for active incubator support
- MSME funds: Application in progress

**Dr. S. A. Sheshadri, Assistant Professor**  
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+91-9481373162 / +91-7868872935



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## BLU OCEAN INNOVATIONS



**Apar Gupta**  
Founder



### Problem Addressed

Counters problem of hair loss effectively and efficiently

### Technology

- A novel product range made from ingredients such as Plant Stem Cells and Nano-keratin
- Keanu is a revolutionary Hairgrowth Serum, made from Stem Cells, that has astounded everyone by everyone by showing excellent results and now being endorsed by Top Dermats and Plastic Surgeons across India, in leading hospitals and clinics.



### Societal Impact

Celebrated within the medical fraternity and among users for its unique and effective formulation. Developed using extraordinary ingredients with synergy of Plant Stem Cells, collagen, Biotin and nano keratin, this serum has been designed to deliver miraculous results, even in case of Stage 6 hair loss, virtually without the use of minoxidil. It truly stands out as a marvel of modern medical science.

Therapy is only required for 6 months duration

### Current status

1. 5000+ users have used the product via Doctor Prescription channel and medical e-commerce
2. Prescribed by leading Plastic Surgeons and Dermatologists in the country
3. Collaborated with 4 leading medical Institutions
4. A revenue of INR 12,00,000 generated till date
5. Listed on leading online pharmacies like Tata 1mg and Amazon pharmacy

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Diagno Plus+



Care Coders  
Amity University, Noida

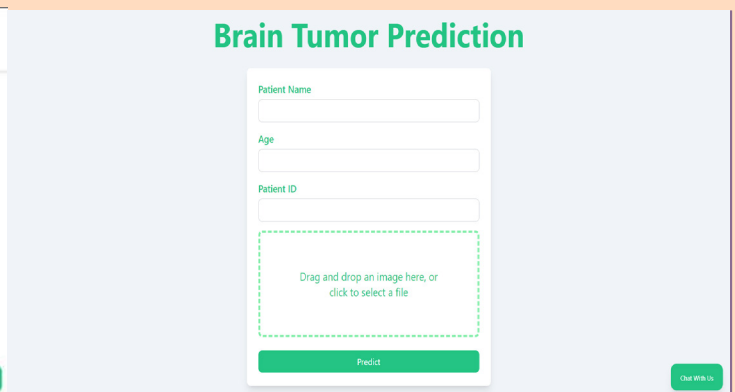
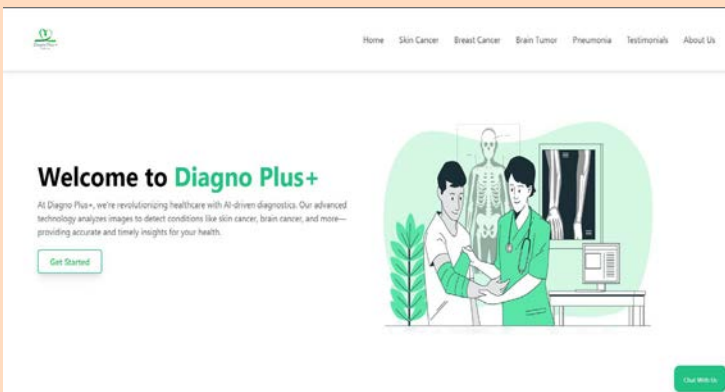


### Problem Addressed

Disease diagnosis is a growing global issue as population increases and healthcare demands rise. With a low doctor-to-population ratio, doctors face immense workloads, reducing their own life expectancy and increasing the risk of diagnostic errors. Annually, medical errors harm over 138 million patients and cause 2.6 million deaths worldwide. Common diagnostic issues include sample mislabeling, instrument failures, costly tests, delays, and limited access in remote areas. A new approach is essential to reduce doctors' burdens, enhance diagnostic accuracy, and make healthcare more accessible.

### Technology

- Convolutional Neural Networking In Deep Learning
- Vision Transformation Models (ViT)
- Retrieval Augmented Generation (RAG)



### Societal Impact

- Cost effective
- Rapid treatment
- Lightens the load on healthcare Infrastructure
- Collection of data
- Availability in remote areas

### Current status

- Prototype Ready
- Top spots in 25+ national and international competitions (Hackathons, Business Plan Competitions and Innovation Challenges)
- Also got a funding offer at an valuation of 10 Cr. by STPI

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



Dr. Vikrant

**Preheal**  
India Ka Total Health



## Problem Addressed

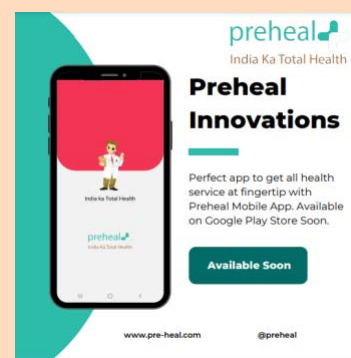
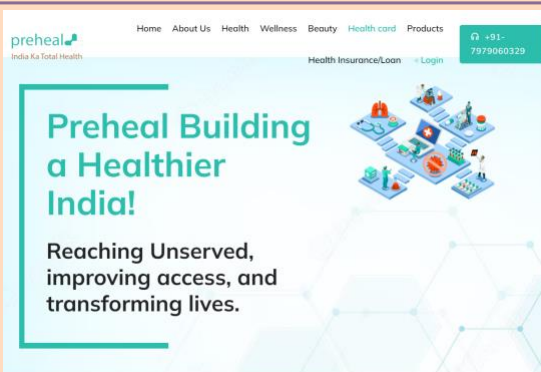
People waste their time in browsing different portal for different services and products for their complete health and allied health & wellness need. Most of the existing startup doesn't provide whole continuum of health services from onset of disease to the recovery of the patient's i.e. Life cycle of a patient. There is lack of initiative where services are available during whole course of treatment of the patient.

There is no any single portal that provides such comprehensive services and products related to life cycle of patient. People are feeling need for such platform where all their needs are met and with high quality services and products. The patient along with their care taker goes through lots of stress agony during treatment which makes this process very miserable.

## Technology

By leveraging these advanced technologies, Preheal aims to provide a seamless, secure, and efficient healthcare experience, making quality healthcare accessible to individuals across India through Web and Mobile app:-

- **Advanced Video Consultation**
- **Electronic Medical Records (EMR)**
- **Secure Communication Channels**
- **Mobile Health Applications**
- **Online Lab Test Booking**
- **Appointment Scheduling Systems**
- **Online Booking and Management Systems**
- **Subscription Management Systems**



## Societal Impact

The social impact of Preheal Innovations is multifaceted, aiming to transform healthcare accessibility and quality, especially in underserved regions like Bihar and Northern India. Preheal Innovations aims to create a positive social impact by addressing critical gaps in healthcare delivery, ensuring access to quality services, and promoting healthier, more empowered communities.

## Current status

Currently our web application and mobile app is up and running. We have onboarded various service providers including hospitals, doctors, diagnostics, spa, cosmetic and laser clinic etc. Many customers have also registered on our website and uptaken services like OPD consultation and surgery and other services from our portal. We are doing offline and online marketing of the startup. We are conducting Health Education and Checkup Camps (HECC) in apartments, rural villages and many strategic locations in the state.



SCAN NOW

<https://pre-heal.com/>

+91 -7979060329



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## KOSMOS – A SATELLITE GUIDED GROUND BASED AUGMENTATION SYSTEM (FOR USE IN PRECISE LANDING OF VARIOUS AIRCRAFTS IN VARIOUS AIRPORTS)



**ASHOK ARORA,**  
CEO, M/s INCREDIBLE GROUP, INDIA  
To Make in India in Collaboration with M/s KOMPAS PA LLC, RUSSIA



### Problem Addressed

#### What is GBAS?

A Ground Based Augmentation System (GBAS) augments the Global Positioning System (GPS) used in airspace by providing corrections to aircraft in the vicinity of an airport in order to improve the accuracy of, and provide integrity for, these aircrafts' GPS navigational positions. The goal of GBAS implementation is to provide a satellite-based alternative to the Instrument Landing System (ILS) supporting the full range of approach and landing operations. GBAS is a precision-landing system that uses GPS receivers, or ground stations, at surveyed locations to check the real-time accuracy of the GPS signals the aircraft is receiving. These ground stations are typically placed at the airport, so any errors they sense should be very close to the errors that would affect aircraft approaching the airport for landing. However, sometimes phenomena in the Earth's ionosphere will produce errors that are different at the GBAS ground stations than aboard the landing aircraft. This means the pilot may be relying on incorrect information during the runway approach. NO GBAS SYSTEMS ARE IN USE IN INDIA AT THE MOMENT, WHEREAS RUSSIA HAS MORE 100 GBAS IN OPERATION

### Technology

#### CORE FUNCTIONS OF KOSMOS – GBAS:

- Provide the GLS precision approach (CAT I);
- Monitoring and tracing of service status of global navigation satellite constellation GLONASS/GPS (GBAS function);
- Realtime monitoring of accuracy specifications for GNSS off-line mode and reporting to air traffic management service about possibility or disability of using any operations with GNSS signals;
- Supporting of local-area differential global positioning system for terminal and final approach procedures as well as NPA, APV (GBAS positioning function);
- Provision of differential mode and landing data (FAS) transfer for ICAO category I precision approach (GBAS landing function);
- Transfer of time stamp and sync pulse 1PPS to external users;
- Monitoring of subsystems self-status for individual units and reporting data to air traffic management services;
- GNSS integrity monitoring and reporting data to air traffic management service as well as transfer to GNSS automated monitoring system.

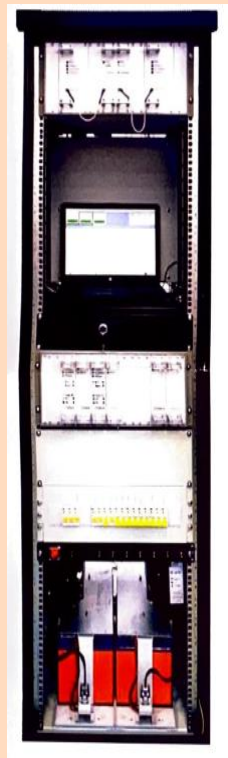
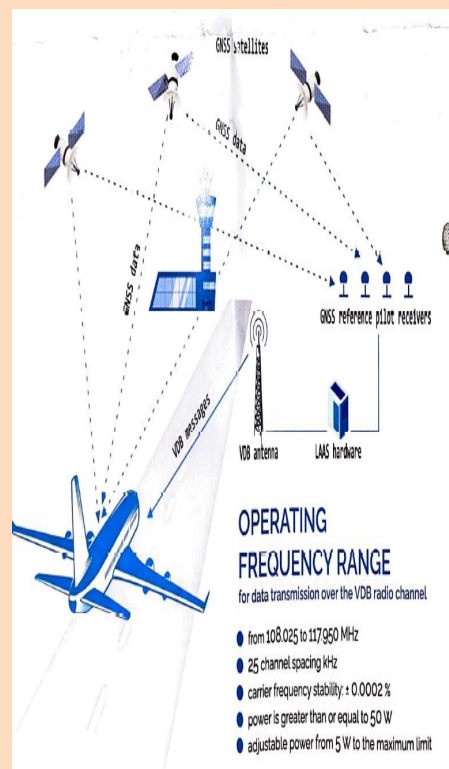
### ADVANTAGES OF GBAS OVER ILS SYSTEMS:

GBAS has several advantages in comparison to traditional ILS. One GBAS station can support multiple runway ends and reduce the total number of systems at an airport. This reduces the Very High Frequency (VHF) requirements and simplifies airport infrastructure. Unlike ILS — which requires one frequency per system — a GBAS only requires one VHF assignment for up to 48 individual approach procedures. The GBAS has more flexible siting criteria, allowing the GBAS to serve runways which ILS is unable to support. A GBAS is sited to minimize critical areas which place fewer restrictions on aircraft movement during ground taxi and air operations. The GBAS approach guidance is steadier than ILS approach guidance. Also, GBAS requires less frequent flight inspections compared to those required of ILS systems.

One System of ILS does require two shelters, distance from them is 3-4 km, shelters should be equipped with air conditioners, and total power consumption of each shelter is 5-6 kW. ILS needs flat land in the radiation area, airport should ensure grass and snow removal all over the year and the maintenance cost too is higher as compared with GBAS

It requires minimal space to install and to maintain as compared with ILS systems in use as mentioned above and the faults if any can be repaired remotely within 30 minutes

HAVE SUBMITTED OUR PROPOSAL TO CHAIRMAN, A.A.I. TO USE OUR KOSMOS-GBAS SYSTEM ON TRIAL BASIS AGAINST NO COST, NO COMMITMENT BASIS TO USE IN ANY ONE AIRPORT IN INDIA TO ASSESS THE PERFORMANCE OF THE SAME [www.kompas.aero](http://www.kompas.aero)



**INCREDIBLE GROUP**  
D-102, VICTORIA GARDEN TOWERS M2K  
AZADPUR DELHI-110033  
M. 9810284647

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## NANOSCALE MATERIAL SYNTHESIS MACHINE

**medic NanoScience Lab**™

**DrNano NANOCORPS**

"NanoScience Lab" "ANUVRAT OUTSIDE"

**Medic Tech Pvt Ltd**

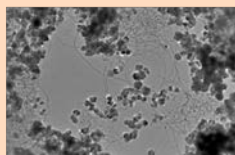
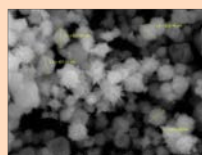
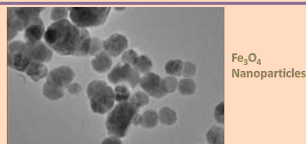


### Problem Addressed

- Nanotechnology, as such, has not been explored fully till now. Due to paucity of nanomaterials, high cost, foreign dependence, it is unexplored, and even its research, leave alone utilization, has remained limited to a few laboratories around the world.
- Till date, there is no such system/machine available that can synthesize nanoscale structures, on a single platform/method/protocol.
- Thus, to tap this unexplored realm, for easy possibility of known applications of nanoscale nanomaterial, and to facilitate discovery of new novel nanostructures new compounds, conjugates etc. with novel properties/applications, an automated, user friendly, nanoscale material synthesis machine is absolutely necessary.

### Technology

- World's first - Nanoscale Material Synthesis Machine - "NanoScience Lab", "ANUVRAT OUTSIDE". A very high value proprietary product – with globally IP protected (European Union, Japan, USA, Canada, Brazil, Australia--India Patent Granted).
- Synthesis, R&D, manipulation of conventional and non conventional (novel) nanoscale materials, in an automated, repeatable fashion. Patented, proprietary technology, with no parallel elsewhere in world.
- "NANOSCIENCE LAB" opens up whole new unexplored world of novel nanoscale materials, with new novel unexplored properties & applications in all sectors.



#### Nanomaterials



#### Nano-colloids



#### Nano-coatings



#### Polymers



### Societal Impact

- It will boost application of nanomaterials in all industries, where different types of nanoscale materials are required.
- The machine system will enable faster research work, and discovery of new novel nanomaterials with novel properties for different applications, bringing a new dawn in advanced materials and Industry 4.0.

### Current status

Machine System currently undergoing internal validation.

**Partners invited for collaborative manufacturing, IP licensing globally.**



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



**Naseh Nisar**  
Ph.D. Scholar, Skuast- K

## Frubus



### Problem Addressed

*Rubus* berries are found in the areas that are not easily accessible. These wild berries are a rich source of bioactive compounds, are underutilized and often go to waste due to lack of awareness among consumers about their nutritional benefits. Also these berries are highly perishable which results in the loss of an important bio-resource with significant potential for health benefits. Our solution is to harness the potential of Kashmiri wild berries by **developing fruit bars, beverages, jams and dehydrated products** that preserve their nutritional integrity and extend their availability beyond the limited harvest season.

### Technology

It lies in the utilization of wild berries of Kashmir as the primary ingredient in our products, showcasing their unique taste and health benefits. We use **minimal processing techniques** to retain bioactive compounds particularly anthocyanins, which are known for their **antioxidant** properties and health benefits. Our products offer a convenient way for consumers (all age groups) to incorporate these beneficial berries into their daily diet, ensuring that they can enjoy the full spectrum of nutritional advantages offered by the underutilized berries.



### Societal Impact

By creating value-added products, we aim to reduce wastage, increase awareness of the health benefits of the underutilized wild berries and generate economic opportunities for local communities.

### Current status

Our technology is developed. We have achieved Technology Readiness Level (TRL) 7, indicating our readiness for commercial production and distribution of our fruit bars. We have successfully registered our production unit under the Food Safety and Standards Authority of India (FSSAI).



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## NeoPORT



**Mamta Joshi**  
 Director  
 Lattice Innovations

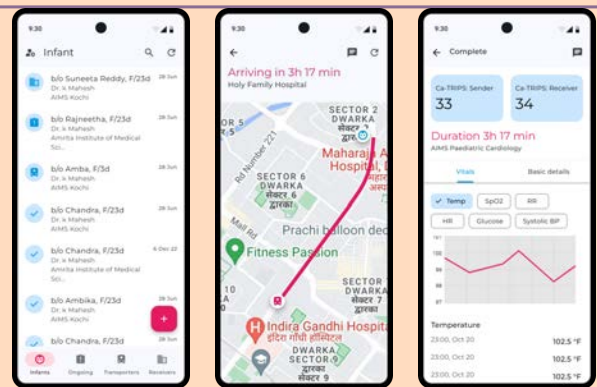
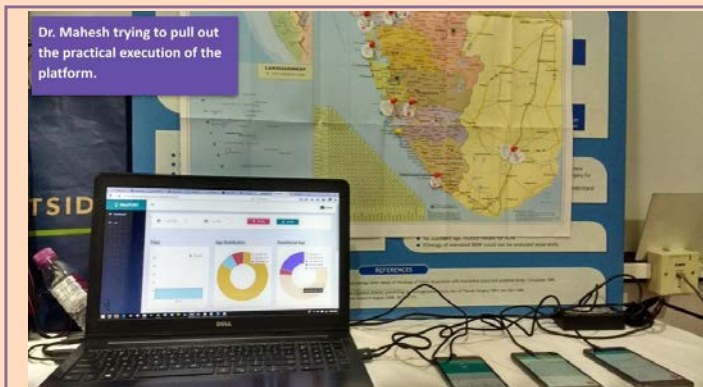


### Problem Addressed

Infants with severe heart defects are routinely transported from secondary and tertiary hospitals, to specialized quaternary hospitals for interventions & surgery. Emergency transport of such infants requires systematic monitoring of heart rate, respiratory rate, temperature, blood glucose and oxygen saturation. However, these vitals, particularly temperature and blood glucose, are often not measured in a timely manner. In the absence of timely monitoring, infants may develop life-threatening complications such as hypoglycemia and hypothermia during transport. NeoPORT was designed and developed to address the acute need for a system that enables consistent and timely measurement of vitals, track transport, and captures critical clinical information.

### Technology

Amrita Institute of Medical Sciences (AIMS), Kochi, is one of the leading tertiary care hospitals in India, with a capacity of over 1,300 beds. Lattice worked with the Pediatric Cardiology team to design and develop a mobile app that tracks critically ill infants during transport and aids in delivering systematic and standardized care during this crucial period. The mobile app connects referring physicians, ambulance staff and referral hospitals. Functionality includes location tracking, group messaging with one-click SOS, and tracking of vitals in real-time. Data is piped to a web dashboard. NeoPORT has been supported by Grand Challenges, Canada, the Genesis Foundation, and Oracle. Grand Challenges Canada is funded by the Government of Canada and is dedicated to supporting Bold Ideas with Big Impact®. It has been used for over 80 transports thus far.



### Societal Impact

NeoPORT offers significant societal benefits by improving health outcomes for critically ill infants through timely monitoring of vital signs during transport, thereby reducing the risk of life-threatening conditions. The app enhances coordination among healthcare providers, fostering trust in the healthcare system and optimizing resource utilization. Its scalability allows adaptation for various critical care scenarios, promoting innovation in healthcare technology.

### Current Status

NeoPORT has been deployed and used for 80 transports at the Amrita Institute of Medical Sciences (Kochi). We are in talks with other organizations and state governments to explore larger scale deployments of the system.





Hosting Partner

INDIA  
INTERNATIONAL  
CENTRE **IIC** where ideas grow



Organizing Partners

C-CAMP  
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**gian**



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## NEURAPIE



**ANAND RAVI**

Affiliated by: DPIIT, AIIMS, STARTUP INDIA,  
WHO, UNICEF, ....

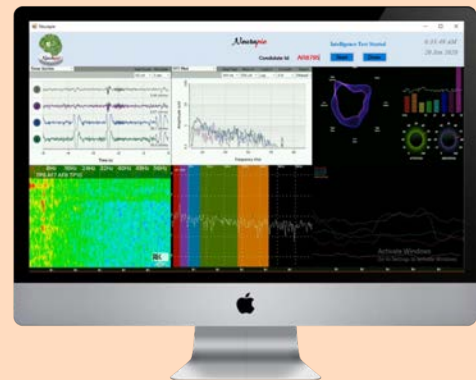


### Problem Addressed

India is known as one of the most Depressed country in the world with higher Suicide rate. 90% people are not happy with their job. Reality- only 2% people are succeed, 98% couldn't understand Personality Type, Intellectual Strength and unable to reprogram their Brain 🧠  
Last year 1.65M committed suicide & this ratio is growing↑ by 21% every year (NCRB).  
Around 15M children are suffering from Mental Health Issues & 264M globally.

### Technology

AI (Brain Computer Interface)  
The world's most Advanced AI Technology (BCI) for Brain Mapping, to measures your Mental Fitness, Efficiency, Brain Performance & all forms of Intellectual Strength (IQ, EQ, SQ, AQ) which fills the gap between YOU and Your SUCCESS, and solving the Mental Health problems like Anxiety, Depression & Suicide.



### Societal Impact

We're working for a Noble Cause to solve mental health problems, like Depression, Anxiety, Suicide,...

### Current status

We're providing service PAN India

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Biobased Gelators for treatment of chemical effluents



**Noubi Keumoe Junior H.**  
JRF UPES Dehradun India



### Problem Addressed

- **Inadequate Effluent Treatment:** Many industries lack the resources to operate individual effluent treatment plants (ETPs), leading to untreated waste.
- **Overburdened CETPs:** Common effluent treatment plants (CETPs) are often at capacity, limiting their effectiveness for large-scale industrial needs.
- **Persistent Organic Pollutants:** Organic effluents tend to have low biodegradability, making them difficult to treat and remove from the environment.
- **Health Risks:** Exposure to untreated organic waste poses significant health risks to surrounding communities and ecosystems.

### Technology

Our technology utilizes gelators derived from biological molecules to isolate and recycle organic solvents used in chemical and petrochemical processes. These eco-friendly gelators selectively target organic solvents, transforming them into gels that can be easily separated and recovered. This process enhances sustainability in industrial solvent use, reducing waste and environmental impact. By introducing a novel, bio-based approach, our solution aims to support cleaner industrial practices while reducing costs associated with solvent waste management and disposal.



Biobased Gelator



Hydrocarbon gels

### Societal Impact

- **Cleaner Waterways:** Reduced pollution from untreated industrial waste helps protect water bodies and improve community health.
- **Economic Benefits:** Lower waste treatment costs empower industries, particularly small and medium enterprises, to reinvest in local
- **Health Improvements:** Minimizes health risks associated with organic pollutants for communities near industrial areas.

### Current status

**Successful Synthesis and Validation:** Prototype of the bio-based gelator has been synthesized and confirmed for effective gelation under lab conditions.



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## DiabeTreats

INNOVATION IN EVERY BITE

**Ms. Priyanka Sharma**  
Founder of Holistic Herbs Daiwik LLP)



### Problem Addressed

- 1. Managing Blood Sugar:** Provides low-glycemic food options to help control blood sugar levels naturally.
- 2. Healthy Snack Alternative:** Fiber-enriched products replace refined snacks, reducing risk of sugar spikes.
- 3. Supports Satiety and Metabolic Health:** High fiber content curbs hunger, aiding in diabetes and weight management.
- 4. Safety and Quality Assurance:** Products are rigorously tested and free from harmful substances.
- 5. Holistic Wellness:** Promotes balanced health by supporting blood glucose, cardiovascular, and digestive health.

### Technology

- 1. Controlled Hydrolysis:** Slows starch digestion, minimizing post-meal blood sugar spikes.
- 2. In-Vitro Starch Analysis:** Scientific testing confirms the products' blood sugar control benefits.
- 3. Certified Safety:** NABL, ISO, and BIS lab certifications ensure quality and safety.
- 4. Patented Formulation:** Unique blend of guar gum and curry leaves is patent-protected.
- 5. Nutrient-Dense and Safe:** High in fiber, protein, and free from contaminants for safe, balanced nutrition.



### Societal Impact

- 1. Health Awareness:** Promotes natural diabetes management.
- 2. Affordable Support:** Accessible diabetic-friendly options.
- 3. Healthy Snack Alternative:** Reduces reliance on refined foods.
- 4. Quality of Life:** Aids in balanced, active lifestyles.
- 5. Community Focus:** Engages in health events and partnerships.

### Current status

- 1. Expanding Product Line:** Cookies, soups, gummies; teas and infused water in progress.
- 2. Patent Secured:** Unique formulations for diabetes.
- 3. Market Presence:** Growing recognition in India.
- 4. Certified Safety:** NABL, ISO, BIS verified.
- 5. Active R&D:** Enhancing efficacy and exploring new solutions.

**Website:** [www.holisticherbsdaiwik.com](http://www.holisticherbsdaiwik.com)

**Phone:** +91 8865899226

**Email:** [info@holisticherbsdaiwik.com](mailto:info@holisticherbsdaiwik.com)

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**Name:** Priyanka Sharma (Founder)

**Phone:** +91 9910621497

**Email:** [sharmapriyanka21992@gmail.com](mailto:sharmapriyanka21992@gmail.com)

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# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Clean Electricity generation using waste heat/waste water



**Himanshu Gupta**  
Renergizr Industries Pvt. Ltd.

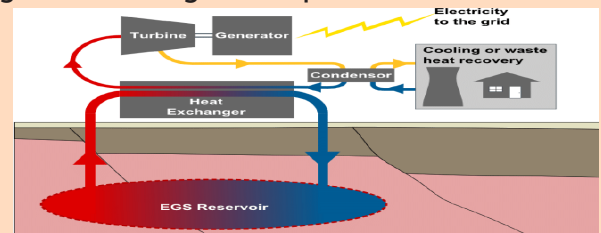


### Problem Addressed

1. Demand of energy will increase by 25% to 30% by 2040
2. Global rise in temperature >1.5°C – Climate Change
3. India crude oil imports constitutes \$11.6 billion, and LNG imports around \$1.5 billion
4. Renewable Weather dependent, require storage, large land, high OPEX cost
5. India's goal of Carbon Neutral by 2070 and 500 GW Clean energy by 2030.
6. Existing electricity Infra : One way communication, energy losses

### Technology

1. Indigenous technology as per local Indian conditions (Patent No. : 202011006850)
2. Cost effective and energy efficient Alkaline Waste water electrolyzer generating green hydrogen and using it as input feed to fuel cell stack



5 KW Prototype



20 KW Pilot Field Demonstration



### Benefits of the H<sub>2</sub>Gensei

- Quiet
- Emission-free saving 46 tonnes\* of CO<sub>2</sub> per year
- Low operating costs
- Configurable according to required output level

### Societal Impact

1. Environmental Impact : Remove 600 metric tonnes of CO<sub>2</sub> greenhouse gas emissions per MW scale (99% less CO<sub>2</sub> than fossil fuel based plants), less land footprint
2. Economic Impact : Created employment opportunities (20 people including ST/SC/OBC)
3. Social Impact : Access to better air quality, save import cost of India (Crude oil and natural gas)
4. SDG 7 (Affordable and clean energy) and SDG 13 (Climate Change)

### Current status

1. 5KW Prototype Model established in Delhi using Geothermal Renewable energy based waste heat
2. 20KW Pilot Field demonstration Model established in Telangana State using Geothermal Renewable energy based waste heat

Link of social media platform :

<https://www.linkedin.com/company/renergizr/>

Contact details :

Email : [renergizr.industries@gmail.com](mailto:renergizr.industries@gmail.com)

M : 9315940284





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## ERGONOMIC INTUBATION POSITIONING SYSTEM



Dr Lohith Basavaraju  
Malleshwari M S



### The Problem

Consequences of delayed /failed intubation (Cormack grading III- IV)

- 8 % difficult
- Hypoxemia
- Excessive sympathetic stimulation
- Pharyngeal/ Dental trauma
- Death

- Multiple blankets/ Multiple PILLOWS( current practice)
- RAMP ( Rapid airway management positioning) position is mandatory to do intubation which is difficult to achieve in majority of patients.

### HOW IT WORKS

Device will replace fixed height pillow, blankets, head-rings.

Allows variation of head height during laryngoscopy/ in real time.



### Societal Impact

The device I –PILLOW , potential life saving device. Comes in handy during critical moments in adjunct to various difficult airway gadgets.

A simple cost-effective solution for a significantly important problem we encounter day in and out.

### Current status TRL-8

Design patent granted  
Utility patent granted  
PCT published.  
National filing phase

Minimum Viable product-ready

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## HAYL – Metabolic Health Monitoring Device



**Gayathri Choda**  
Founder  
Aarca Research India Pvt Ltd



### Problem Addressed

Inadequate access to essential metabolic health screenings in remote and underserved areas presents significant challenges. Hayl aims to address the gap in proactive health management for conditions such as diabetes, hypertension, and dyslipidemia. By providing easy-to-use technology for continuous health monitoring, Hayl enables early detection and management, helping to reduce the incidence of metabolic diseases and improve community health outcomes. This approach empowers individuals with critical health insights that can guide lifestyle modifications and preventive care interventions.

### Technology

Hayl leverages cutting-edge biometric sensors and advanced machine learning algorithms to provide comprehensive metabolic health data. This system captures and analyzes multiple health indicators, including heart rate variability, blood oxygen saturation, and sleep patterns to type 2 Diabetes risk score, Hypertension risk score and 2-lead ECG data. The integration of AI helps in the precise interpretation of health data, enabling personalized health insights and recommendations for lifestyle adjustments, aimed at improving metabolic health and preventing chronic diseases.



### Societal Impact

Hayl significantly enhances public health by enabling widespread, affordable access to metabolic health screening, particularly in remote and underserved communities. This proactive approach helps in early detection and management of chronic conditions, reducing the burden on healthcare systems. By empowering individuals with timely health data, Hayl contributes to a broader societal shift towards preventive healthcare, improving quality of life and reducing healthcare disparities. This impact is crucial in areas where traditional healthcare infrastructure is limited or inaccessible.

### Current status

Hayl is currently being integrated into health initiatives across multiple regions. It has been rolled out in several pilot programs and clinical validation trials targeting rural and underserved communities, where it is being evaluated for its effectiveness in enhancing metabolic health monitoring. Ongoing feedback from these deployments is crucial in optimizing the system's algorithms and functionality to better serve targeted populations. Collaborations with healthcare providers and insurers are expanding to broaden its reach and impact.

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[gchoda@aarca-research.com](mailto:gchoda@aarca-research.com)

+91 996 352 2288

[www.aarca-research.com/hayl](http://www.aarca-research.com/hayl)



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

A novel polymer; stabilizer for PVC pipelines -An effective method for the treatment of MIC



**SAJAL**

Central University of Rajasthan and Ground Water Department Rajasthan

## Problem Addressed

Corrosion control is an important aspect of safe drinking water supplies. The effects of corrosion have drastic effects both on public health and economic aspects of the country. Corrosion leads to losses worth USD 110 billion in India annually. According to international zinc association, India loses 5-7% of GDP due to corrosion. Novel polymer derivative of biopolymer (guar gum) is utilised as a stabilizer for polyvinyl chloride (PVC). Introduction of guar amine in a syndiotactic arrangement in polyvinyl chloride polymer increases its resistance towards microbiologically influenced corrosion (MIC). Beside this the novel polymer also has excellent supramolecular properties against harmful trace metal ions, as it can selectively chelate out the harmful trace metal ions. Therefore the novel polymer as a coating can also improve the quality of drinking water.

## Technology

Synthesize of Guar Amine- Guar amine has been already synthesized in the EERL laboratory of Central University of Rajasthan (CuRaj). Guar gum is found in large amount in Rajasthan and guar amine has been found to be one of derivative of guar gum, which is not susceptible to microbial attack.

Guar amine maintains its physical as well as chemical properties in presence of microbes, which has been already tested in EERL laboratory of Central University of Rajasthan.

Guar Amine as a stabiliser for Polyvinyl Chloride (PVC) polymer- Guar amine will be introduced to polyvinyl chloride polymer chain via syndiotactic arrangement. The newly formed polymer becomes more susceptible to microbial corrosion, therefore becomes not only economically feasible but also beneficial for public health.

## Process of Guar Amine Synthesis



Guar Gum solution



Sulphonyl Derivative



Azide Derivative



Guar Amine  
(Final Derivatized Product)

## Societal Impact

Guar amine has been already synthesized in the EERL laboratory of Central University of Rajasthan (CuRaj). Corrosion leads to losses worth USD 110 billion in India annually. According to international zinc association, India loses 5-7% of GDP due to corrosion. There is a huge investment in the mining of lead and its purification. Replacement of lead oxide by the novel polymer can be a major boost for the economy the guar gum is already present in excess amount in Rajasthan. Therefore the novel polymer is a major boost not only for the drinking water sector but also for the mining sector.

## Current status

Currently, we are at technology readiness level three and business readiness level four.

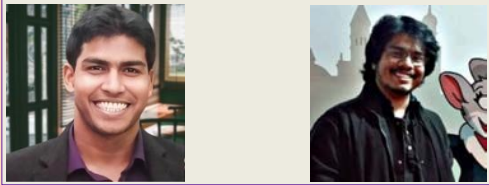
Cost structure- In our laboratory we have synthesized about 50g of guar amine with an investment of only 1000 rupees. As per our calculation for the coating of 10 km of water pipeline we require an investment of only 60,000 (including all parameters).





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## BiomLife® - Universal Specimen Transport and Preservation Media



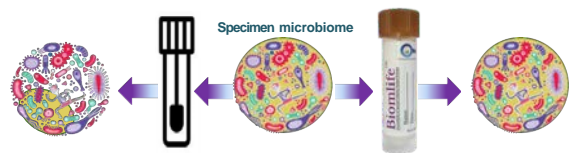
1. Dr. RAJKUMAR HALDER
  2. Mr. GAGAN HANJON
- RUHVENILE® BIOMEDICAL OPC PVT. LTD.**



### Problem Addressed

1. Not anymore Specimen spoil (generally 80% spoiled without BiomLife), Ensure the specimen integrity during transportation, without need of cold chain..
  2. True depiction of microbial composition within the microbiome
  3. Collect diverse biological specimens..
  4. Maintaining the viability of both aerobic, anaerobic and fastidious species together..
  5. Generate accurate, reliable and reproducible data for drawing conclusion..
- TRANSPORTING WORLDWIDE WITHOUT COLD CHAIN WITHIN 48H**
- Reliability**

### Technology



FEATURES	Competitor	BiomLife®
Specimen Integrity	Microbial loss, reduced diversity	Full microbial preservation, ensuring diversity.
Viability Assurance	No viability assurance	Ensures viability and revival of all species.
Sample Versatility	Different media for each specimen	One tube for all microbes (bacteria, viruses, fungi, etc.)
Freezing	Requires immediate freezing	No cold chain; stable at room temp for 48 hours.
Remote Work	Limited by freezing needs	Ideal for field and remote collection.
Proliferation Control	No control	Prevents proliferation, maintains stable CFU counts.
Biobanks Suitability	Limited microbial revival	Ideal for biobanks with excellent microbial revival.
OMICS Application	Focused on DNA/RNA sequencing	Supports comprehensive OMICS
Healthcare Use	Limited to research	Broad applications, including diagnostics.
Formalin-Free	May contain formalin/alcohol	100% formalin- and alcohol-free.
Sample-to-Buffer Ratio	1:9 or 1:4 (with beads)	More efficient 1:1 ratio, more economical

### BiomLife® - Universal Specimen Transport and Preservation Media



- **Collect** - Diverse Biological Specimen
- **Preserve** - All types of microbes
- **Transport** - Without Cold chain with in 48 H
- **Revive** - All preserved microbes

Available in 4 variants: 0.9 mL | 1.5mL | 3.0 mL | 5.0 mL (Left to Right)

#### WHO ARE USING BIOMLIFE



### BiomLife® featured in esteemed publications, with more to come soon

#### Preprints with THE LANCET

Chronic Salmonella Infection Contributes to Gallbladder Carcinogenesis 54 Pages • Posted: 16 Aug 2023

**Fecal and gallbladder tissue samples collection for microbiome study:** Fecal samples were collected from the cases and controls after explaining the method of sample collection in a sterile container-containing sample transport buffer **BiomLife (Ruhvenile Biomedical, India)**. Each participant was provided with a sterile plastic sheet and a sterile container with spoon. They were asked to get their hands and genital area cleaned with soap and water. In a dry place, the sterile

Received: 13 February 2024 | Accepted: 1 April 2024  
DOI: 10.1002/jm.29401

#### RESEARCH ARTICLE

Metagenomic insights into fungal community composition of the nasopharyngeal region of COVID-19 associated mucormycosis patients from India

COVID-19 cohort, sampling was done at baseline (time point 1 i.e. Figure S1). The swabs were placed in a sterile transport buffer SCT1) and at 7 days of hospitalization or discharge (whichever was **BiomLife (Ruhvenile Biomedical OPC Pvt. Ltd)**. The cotton tips (ear) (time point 2 i.e. SCT2). The upper respiratory sample were then spun for 10 minutes at 400g and stored at -80°C for obtained with a cotton tip by rubbing the middle means under transportation.

#### ALL IN ONE

- Bacteria ✓
- Aerobic sp. ✓
- Anaerobic sp. ✓
- Viruses ✓
- Fungi ✓
- Parasites ✓
- Phages ✓
- Fastidious sp. ✓
- Virus Like Particles ✓
- Low abundance sp. ✓
- DNA/RNA (internal) ✓
- Metabolites ✓
- PCR|RT-PCR|NGS|WGS ✓
- Advanced OMICS ✓

Unleash diverse microbiome secrets with confidence

### Societal Impact

- Preventing up to 80% specimen spoilage before analysis.
- BiomLife ensures integrity of any specimen for reliable analysis.
- Development of personalized medicines for Diabetes, NAFLD, and other diseases.
- Enable scientists to generate accurate cohort study data on microbiome role in human health and disease.
- Potential to Address Current and Future Pandemics, Including Silent AMR.
- Revolutionize the healthcare system and promote improved public health.
- Reduce dependence on imported media, saving billions annually.

### Current status



Trusted By Esteemed Hospitals, Institutes And Leading Medical Doctors, Scientists In Cancer, Gastroenterology, Microbiology, Radiology, Lab. Medicine, Forensic, Sepsis, Microbiome Studies & Beyond in 4 continents

- Selling globally, with no geographical limitations (IAF - ISO 9001:2015 certified).
- Over 80,000 diverse samples preserved and transported to date, making it the ideal choice for reliable microbial analysis.
- Nominated as one of the top 8 innovations to improve human conditions by the prestigious Galien Foundation – India (March 3, 2024).
- Internationally recognized by Hello Tomorrow (Paris) and the governments of Belgium and the UK. (2024).
- Looking for investments for global expansion.

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Khadyam Speciality Foods Pvt Ltd



Sitaram K.  
Co-Founder & CEO



Madhavi K.  
Co-Founder & COO

MADHAVI.K (Founder)  
SITARAM.K (Co-Founder)



### Problem Addressed

The global rise in lifestyle disorders, such as obesity, diabetes, and cardiovascular diseases, is exacerbated by unhealthy diets and sedentary lifestyles, affecting even the productive age group of 30+. This trend results in significant economic losses. Current market alternatives labeled as healthy are often fortified, synthetic, and processed with high levels of sugars, salts, preservatives, and chemicals, failing to provide complete solutions. Consumers are increasingly seeking minimally processed, convenient, all-natural ingredients that support preventive healthcare.

### Technology

Khadyam uses advanced process innovation to create healthy, convenient Ready-to-Eat products which are based on Indian Ancient Grains such as Millets and Buckwheat with a 24-month shelf life with free from additives and preservatives/Chemicals. Our minimal processing and innovative packaging maintain freshness, while blockchain ensures transparency. Combining scientific research with culinary expertise, we deliver nutritious, affordable along with usage convenience.



### Societal Impact

Khadyam promotes sustainable consumption and production through innovative community sustainable agriculture, empowering 1,350 women farmers to cultivate rain-fed crops over 4,000 hectares, saving 150 metric tons of CO2 and 1.35 million liters of water. We ensure transparency with blockchain, create marketplaces, and offer minimally processed, all-natural ingredients, fostering community health and sustainable development.

### Current Status

Khadyam, founded in 2018, is a thriving food tech venture dedicated to restoring the pride of traditional Indian grains like millets and buckwheat, while combating global warming and lifestyle disorders. We have built a sustainable, climate-resilient supply chain with small and marginal women farmers. In FY 23-24, we generated around ₹1.8 crore, saved 150 metric tons of CO2 emissions, and conserved 1.35 million liters of water. With our new range of Ready-to-Eat (RTE) products, we aim to cater to consumers across the country and globally.





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## “Haal-Chaal Pravartak”: A Personalized Digital Gym for Heart & Lung Wellness

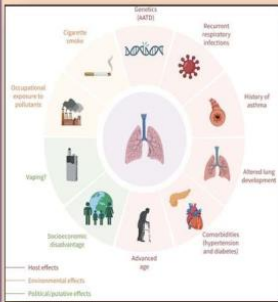


**Tarun Adarsh & Sanya Mishra**  
Tech Atriocare Private Limited



### Unaddressed Heart & Lung Health Risks:

A growing concern, increased morbidity



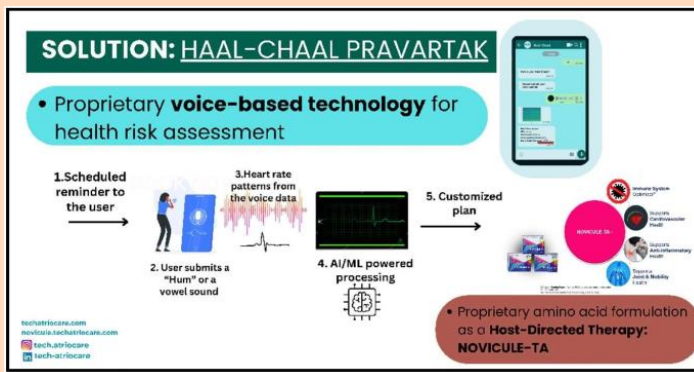
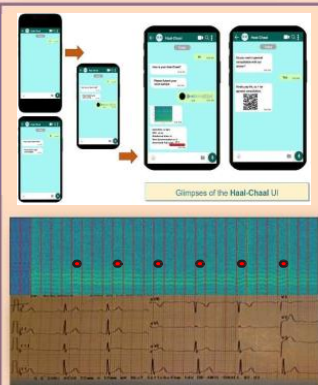
- **30+ million** Indians with asthma and COPD\*  
\*Indian Chest Society
- **20+ million** Indians affected by cardiovascular diseases\*\*  
\*\*Indian Heart Association.
- Limited access to quality health & wellness services, particularly for elder ones
- Existing health trackers lack user engagement & adherence

## HAAL-CHAAL PRAVARTAK

Breathe Strong Live Strong

A proprietary platform based on vocal biomarker analysis technology offering:

- Personalized heart & lung wellness assessment & management recommendations
- Ayurveda-inspired humming exercise
- Health risk analysis using big data analytics
- High convenience & adherence through social media integration



### Social Impact:

- Improved health outcomes
- Enhanced accessibility & affordability for underserved populations
- Economic benefits
- Alignment with government initiatives (Ayushman Bharat, Digital India)

### Current Status:

The project is at TRL-5 stage  
(Proof of concept is established with early stage validation)



techatriocare.com  
novicule.techatriocare.com  
tech.atriocare  
tech-atriocare





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Photo-Biomodulation (PBM) Technology a non-invasive supportive care therapy for cancer patients



**INNOVATOR**

**Dr. Shakti Upadhyay**

Founder Director  
Center for Photomedicine  
Trisamy Healthcare Pvt. Ltd.  
Navi Mumbai

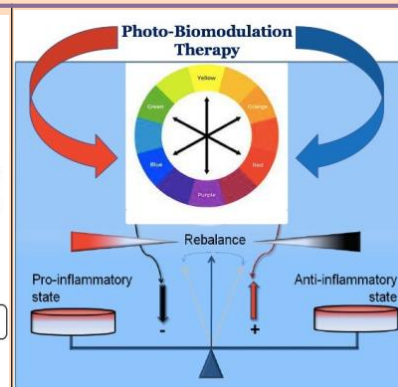
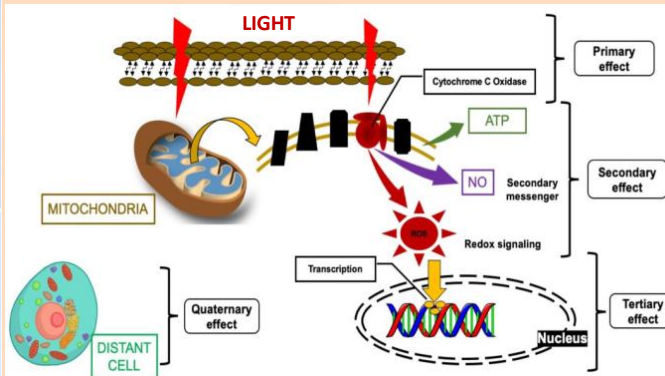


### Problem Addressed

- Prevents / reduces the side effects of Chemo/ Radiation therapy in Cancer Patients
- Restores / promotes immunity in post-therapy cancer patients
- Accelerates Post-surgical recovery
- Reduces pain and inflammation
- Restores Skin and Hair damage following chemo/radiation therapies
- Free from any side effects
- Enhances overall 'Quality of Life' in Cancer patients

### Photo-biomodulation Technology

- Photo-biomodulation (PBM) is a non-invasive technology using the visible frequencies of light (400 - 700 nm).
- Trisamy PBM technology uses LED-based medical devices
- Trisamy PBM technology uses an innovative combination of photo-energy frequencies and photo-adjuvant formulations (comprised of natural products)
- Trisamy PBM therapy acts through the regulation of REDOX imbalance and inflammatory mechanisms
- Trisamy PBM therapy can be used for treatment of any immune-mediated / inflammatory disorders



### Societal Impact

- Enhanced Quality of Life
- Reduced Fatigue and Pain
- Improved Emotional and Mental Health
- Minimized Healthcare Cost
- Enhanced immune Function
- Increased Therapy Tolerance
- Non-Invasive Alternative

### Current Status

- Undergoing clinical validation of Trisamy PBM therapy for enhancing "Quality of Life" in cancer patients
- Exploring strategic partnership with Cancer Hospitals / Oncology Centers / Multi-Specialty Hospitals
- Process of manufacturing Photo-LED Devices specifically designed for Trisamy PBM technology under "Make in India" initiative (currently manufactured in France)

Hosting Partner

INDIA INTERNATIONAL CENTRE **IIC** where ideas grow



Organizing Partners

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**Gian**



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## NIDHAAN



Xpedicer industry pvt.ltd

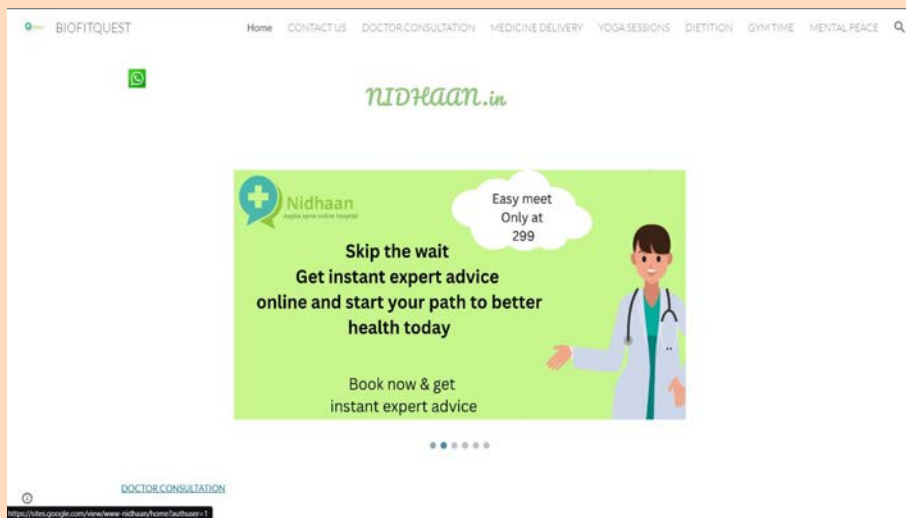


### Problem Addressed

Limited healthcare access, high costs, and lack of personalised care, especially in remote areas.

### Technology

HealthTech uses AI, telemedicine, and wearable devices for personalized, efficient healthcare.



### Societal Impact

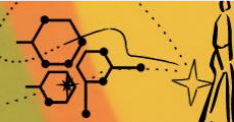
Expands access, reduces costs, promotes preventive care, and empowers individuals to manage their health.

### Current status

HealthTech is growing fast with innovations in digital records and diagnostics but faces challenges in privacy and adoption.







# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Watsan™ Terafil™ Natural Water Purifiers



**Chandrasekaran J**

*Director, Watsan Envirotech Private Limited*



### Problem Addressed

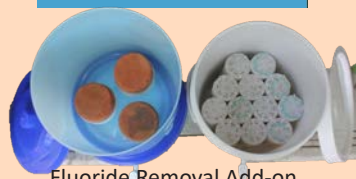
73% of Indians live in Villages, but seldom they get drinking water. Watsan focuses on reaching out to the last mile child and woman to provide them potable water. We also make customised purifier like arsenic, fluoride removers, depending on the region specific anomaly.

### Technology

Clay based nano-pored filter media, which is zero-wastage, zero-energy, natural gravity based water purifier. We make standalone purifiers to larger community purifiers to large IoT based Water ATMs and dispensers. The product is licensed and accredited by DST, CSIR and CIPET, three major scientific institutions of the country.



Arsenic Removal water filter



Fluoride Removal Add-on



### Societal Impact

Purifiers given to

- 5,00,000 rural households
- 10,000 Anganwadis
- 1,000 schools
- Kerala, Chennai, Assam, Hyderabad flood victims
- BSF border Wagah, Kargil
- Saved so far 2750000 tonnes of Carbon Emission by saving energy, avoidance of burning wood /charcoal to boil water

### Current status

Boot-strapped

Grown 27 X since inception (2013)  
Looking for NGOs, SHGs, tier 2 , tier 3 cities and village change makers who can take Watsan Purifiers to all parts of the country.



Contact: [chandra@watsan.in](mailto:chandra@watsan.in)

[www.watsan.in](http://www.watsan.in)

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# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## Bio-UV filter sunscreen

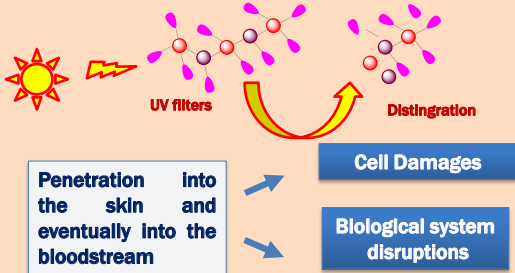
**Dr. Gowri Jayamurugan**  
**Founder, Gowriz Skincare Pvt Ltd**  
 Incubated in IISER, Mohali

**gowriz**

Be Yourself

### Problems stated by worldwide studies

- Allergies caused and hence the right fit is a must
- Absorption of the UV filters into the skin
- Opaque white layer on the skin
- Greasiness or oiliness post application leading to sweatiness



**68% of respondents are dissatisfied with the sunscreen products currently available in the market**

Int J Dermatol. 2020 Sep; 59(9): 1033-1042. CosmoDerma 2023 • 3(62)

### Scientific principle to prototype

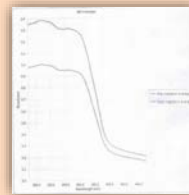
The diagram shows the reaction: **Sporopollenin** (Starting material) + **Amine polymer** (Optimized condition) → **Product (UV-filter, 95% yield)**. Below the reaction, there are two Cryo-TEM images: one of Sporopollenin and one of the UV-filter product.

CS patent: E-2/950/2024/DEL

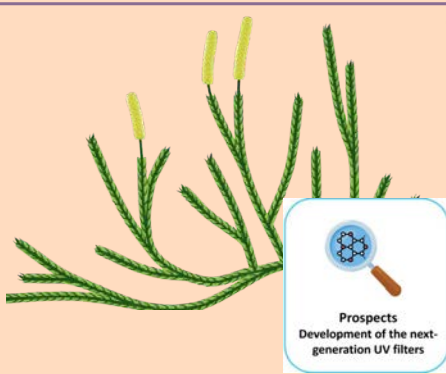
THE DEVELOPMENT OF SPOROPOLLENIN WITH AN OLIGOAMINE BASED UV-FILTER FOR SKIN CARE APPLICATIONS  
 Other Ingredients: Coconut oil, Shea butter, Lanolin, GMS, PGPR, Vitamin E, Glycerin, Hyaluronic acid, sodium citrate, microcrystalline cellulose and essential oil (preservatives).

### Sporopollenin (Biomass) derived UV-filter (USP)

- Full range of UV-rays absorption by sunscreen and does not penetrate into the skin - (UV-A+UV-B, blue light)
- Stable active ingredient
- Complete skin protection - Prevent penetration of UV-rays
- 5% of active ingredient opposed to 20% in market (to avoid white cast)



Results : (3% UV-filter)  
 In-vitro SPF obtained for sunscreen is 23.17  
 Broad Spectrum- YES  
 Critical wavelength 377  
 PA rating as PA+++



### Market Analysis

In 2023, Indian sun protection market will generate US\$0.68bn in revenue. By 2023-2028, the market is expected to grow by 8.02% per year (CAGR 2023-2028).

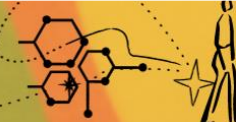
The global sun care products market size was valued at USD 13.97 billion in 2022 and is anticipated to grow from USD 14.40 billion in 2023 to USD 19.65 billion by 2030, exhibiting a CAGR of 4.5% growth during the forecast period of (2023-2030)

<https://www.statista.com/outlook/cmo/beauty-personal-care/skin-care/sun-protection/india#global-comparison>

### Current status

#### TRL-6 Preclinical trial

- In-vitro SPF test has been done in CCFT Pvt lab, Meerut
- In-vivo skin irritation study (animal study) has been carried in GNDU, Amitsar.
- In-vivo skin irritation (human skin) has been carried out in Mascot spln control Pvt Ltd, Mumbai.
- Cytotoxicity test has been done in CCFT Pvt lab, Meerut.



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## First-of-its-kind anti-bacterial, anti-oxidant and UV-protective blue wool jeans



**Satendra Singh**  
Founder, Indigotex Private Limited



**INDIGOTEX**  
WHERE INNOVATION MEETS EXCELLENCE

### Problem Addressed

- Existing denim is made of cotton fiber which has no thermal insulation and is not suitable to wear in cold climates (Temp <18 °C)
- In cold climates warmer fiber like wool is required but dyeing wool with indigo dye (the only dye responsible for creating a worn-out/faded effect on denim) results in the degradation of wool
- Existing non-denim wool clothing used in a cold climate is the most potential means for the spread of infectious bacterial diseases
- Moreover, existing denim manufacturing is the most water-polluting sector of the textile industry.

### Technology

- We have successfully dyed wool with indigo dye for the first time without any loss in its mechanical and physical properties
- The blue wool jeans are shrink-resistant, detergent washable, indigo-dyed, wool and wool blended denim with advanced mechanical, comfort and thermal properties
- The newly developed products have temperature suitability from **-10 to 20 °C** whereas existing cotton denim will not provide warmth and comfort
- The water consumption in denim processing has been reduced from 250 to only 30 liters of water/kg of material through waterless plasma technology



Indigo-dyed wool yarn    Hygienic blue wool denim



Waterless cold plasma technology



### Societal Impact

- Health Benefits:** Antibacterial, antioxidant, and UV-protective properties enhance hygiene, skin protection, and comfort
- Environmental Impact:** Wool is natural, renewable fiber and plasma technology makes its denim production waterless, sustainable and chemical-free
- Community Empowerment:** Wool denim meets the demand for cold climate denim. Supporting local economies

### Current status

- Wool denim fabrics have been developed with thermal comfort from -10 to +20 °C
- The products have been tested for 99.99% anti-bacterial and anti-oxidant activity with UPF value of 50+
- Indigotex has streamlined its path for commercial production and is ready to launch in the market



Follow us

POC: Satendra Singh  
Email: [Satendra.singh@indigotex.co.in](mailto:Satendra.singh@indigotex.co.in)  
Mob No: +91-8769008442



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## AAPKA



Prabal Pratap Singh & Team



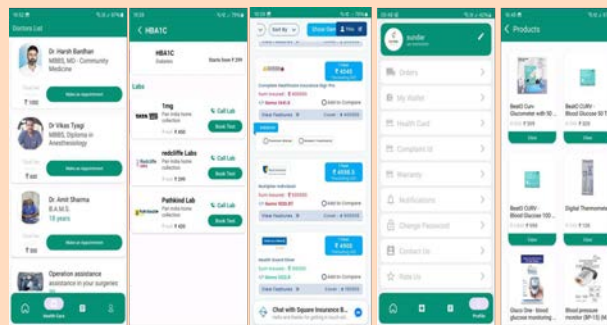
### Problem Addressed

The rural areas of India face significant challenges in accessing quality healthcare and essential goods, leading to pronounced health disparities and lower average life as compare to urban India.

Transparency in bills, unaffordability and lack of information are the factors influencing their decision of going to a hospital and they go only when there is a matter of life and death. This leads to late detection of diseases. The lack of well-equipped healthcare facilities in villages forces residents to prolong their treatments, incurring additional expenses and inconveniences later, especially for vulnerable populations.

### Technology

PHP,, Android Studio  
Flutter,, react native



### Societal Impact

Every year around 20-25 lakhs people die from non critical diseases in India, because they don't go to hospital or don't take their treatment on time. Most of these people are from rural or semi rural communities.

Aapka is making the process of hospitalization easy and transparent for people in the bottom and in process saving money and lives. Aapka provides an earning opportunity to one person in the village as a gram mitra, who not only helps people in improving their health care, but also make a livelihood for themselves.

### Current status





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



Dr Archana L.A  
CMO



Dr Linto Jacob  
CEO



Mr. Yatinder Kataria  
CTO



Dr Poonam Sharma  
COO

## AYURVEDA FOR LIFE

SHADANGA AYURVEDA



### Problem Addressed

AYURVEDA SERVICES- MAJOR ROADBLOCKS

- ACCESSABILITY & AVAILABILITY ISSUES
- AUTHENTICITY CONCERNS
- AFFORDABILITY CONCERNS

AYURVEDIC PRODUCTS (AVAILABLE ONLINE & OFFLINE)

- ALL AYURVEDIC PRODUCTS UNDER SINGLE UMBRELLA – PROPRIETARY, CLASSICAL & HERBAL COSMETICS

AYURVEDA TRAINING (ONLINE & OFFLINE)

- PROFESSIONAL PROGRAMS
- LIFESTYLE TRAINING

### Technology

AYURVEDA SERVICES

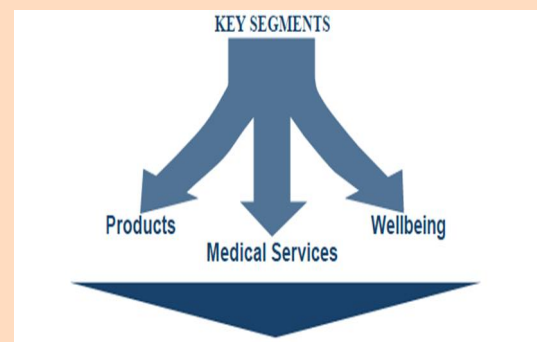
- HYBRID SERVICE DELIVERY
- SUBSCRIPTION MODELS

AYURVEDA PRODUCTS

- SHOPIFY ECOMMERCE PORTAL
- AMAZON & FLIPKART

AYURVEDA TRAINING

- SHADANGA AYURVEDA & YOGA GURUKUL APP



- AUTHENTIC AYURVEDIC SERVICES (CLINICAL & WELLNESS) ARE EASILY ACCESSIBLE
- AFFORDABLE
- ONE STOP SOLUTION FOR ALL AYURVEDIC NEEDS- SERVICES , PRODUCTS & TRAINING
- EMPLOYMENT GENERATION

### Current status

- EARLY TRACTION STAGE

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## HANDBLOOM By Aarogya Seva

**Dr. Dayaprasad G Kulkarni,**  
Founder & Director- Aarogya Seva



### Problem Addressed

The problem is the lack of sustainable livelihood opportunities in underserved communities, especially in rural areas of Karnataka, Andhra Pradesh, and North East India. These regions face significant challenges in creating economic opportunities due to limited access to resources, infrastructure, and markets. The difficulty lies in developing a sustainable ecosystem that can effectively utilize local resources while overcoming barriers to long-term economic growth and job creation.

### Technology

Our solution focuses on empowering underserved rural communities by transforming traditional skills into sustainable livelihoods. These communities, often led by women, rely on age-old practices for self-sustenance but remain trapped in poverty due to financial insecurity and a lack of market access. Despite their valuable skills, many people are unpaid for their labor or earn far below their potential. To address this, our program promotes entrepreneurship and supports the formation of collectives, where members can pool resources, share knowledge, and increase bargaining power. By fostering these collectives, we aim to improve the livelihoods of rural families, create fair market opportunities, and strengthen community support networks.



### Societal Impact

Our initiative aims to become a tech-driven aggregator platform, bringing together sustainable lifestyle products in one place, creating a first-of-its-kind bioethical enterprise. By improving the value chain and revenue streams for farmers, producers, tribal communities, and artisans, we directly empower local stakeholders and create fair market access for their products. We also provide an improved impact spending platform that connects informed urban volunteers and consumers with these ethical products, enabling them to make more conscious purchasing decisions. In addition, our platform fosters innovative emerging solutions, supported by urban and international incubators, investors, and subject matter experts. This collaboration helps build ecosystems that promote circular economies, drive climate action, and support sustainable development.

### Current status

We have established a robust network of over 5,000 artists, farmers, and community leaders across India, creating a strong foundation for collaboration and growth. Our dedicated 5-member full-time executive team is committed to driving the mission forward, ensuring the success of every initiative. Currently, our consumer-directed app is in its beta testing phase, with promising feedback from early users. Additionally, our safe recycler device is now market-ready, offering an innovative solution to waste management. To further expand our reach, we are preparing to open our first retail store in Bangalore, providing a physical space to showcase our sustainable products and engage with consumers directly.





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## FOREST FIRE ERADICATION USING DRONE AS A TOOL



**Arpana Kumari**  
Director and CEO  
Robofly Technology Private Limited



### Problem Addressed

- ❖ 54.4% of India's forests are susceptible to fires, with the potential for widespread environmental and economic damage.
- ❖ Estimated economic loss of approximately 8.3 billion USD from exposed forest areas.
- ❖ Forest fires not only threaten wildlife and ecosystems but also **impact local economies and community resources** that rely on forested areas.
- ❖ **Carbon dioxide (CO2)** emitted from forest fires **grew by 60%** across all forests globally since 2001.

### Technology

- ❖ Natural **forest fire prediction model**
- ❖ Leverages **drone technology** for **Immediate and precise** information provided directly to the nearest fire department.
- ❖ Our software is curated up to **99% accuracy** for detection providing information like location, intensity, spread risk, etc.
- ❖ Our prediction model is **created for a specific forest zone making it unique** and dedicated to a particular biodiversity



### Societal Impact

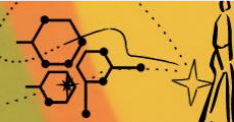
- ❖ Reducing the frequency and severity of forest fires
- ❖ Protects the communities that rely on forest resources.
- ❖ We reduce the loss of livelihood and biodiversity.
- ❖ Provide reduction in carbon content release, and help in reducing surface temperature increase after a fire incident.

### Current status

- ❖ We are in the trials and testing stage.
- ❖ Our software is up to 99% accurate.
- ❖ We are working on the hardware development.
- ❖ Moving from TRL 6 to TRL 7
- ❖ Looking for real time testing at forest area.







# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Climate Smart Technologies



ScaNxt Scientific Technologies Pvt Ltd  
IIT Kanpur



### Problem Addressed

- ❖ Rapid, affordable, scalable and accurate method for testing nutrients
- ❖ Affordable Pest detection and Advisory

### Technology

- ❖ Infrared Spectroscopy, integrated with AI/ML powered SaaS
- ❖ UV trap based capturing, AI powered detection & Advisory



### Societal Impact

- ❖ 3.65 lakhs tests
- ❖ 36,000 farmers
- ❖ 61,000 acres

### Current status

- ❖ **India:** 21 States
- ❖ **Africa:** Rwanda, Tanzania,
- ❖ **Cameroon South Asia:** Thailand

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Nutritious GFCFSF Foods As Early Dietary Interventions for Young Kids With Autism



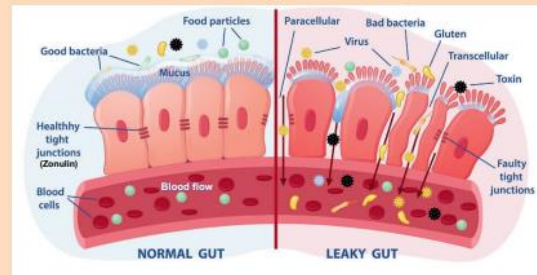
Arnab Guha, Neha Tyagi, Subhra Guha, Gautam Guha  
Impeccable Innovations Pvt Ltd



### Problem Addressed

- Currently, 1 in 36 kids below 8 years of age are diagnosed with Autism Spectrum Disorder (CDC, 2023)
- That means ~3% of the kids born today are getting diagnosed with Autism et al. before they are 8 YO
- No wonder, ASD is the fastest growing NEURODIVERSE condition across globe
- There is no medical cure or any medicine/drug which can improve ASD characteristics significantly in kids

### Technology



- Our scientifically designed plant-based nutritious foods are GFCFSF (Gluten-free Casein-free Soy-free)
- Main focus has been on how to improve the leaky gut in autistic kids et al

### Zero Compromise | Zero Gluten



### Salient Features

- Easy to use | 5+ years completed in Indian market
- Rich in protein & fiber | Plant-based | With Millets
- No side-effects | Trusted by doctors
- Heavy metals accumulation reduction
- Hyperactivity reduction | Better eye contact
- Better verbalizing | Improved empathy

### Societal Impact

- Innocent lives are getting positively impacted
- Parents feel overwhelmed seeing their autistic children under spectrum getting improved & lead a life which is compatible with the society
- Improving the gut-brain axis, proving synergistic with the efforts of therapists & doctors
- Tomorrow, these children will be able to contribute to GDP as responsible citizens of the world

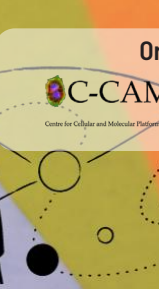
### Current status

- Sportify branded GFCFSF food products are there in the Indian market since 2019 & FSSAI approved
- Getting recommended by healthcare professionals like medical doctors to their autistic patients
- Significant repeat purchase by our clients over the years & getting export orders as well
- Already sold 5+ tons in the Indian market
- Gearing up for clinical trials to strengthen the tech



Hosting Partner

INDIA  
INTERNATIONAL  
CENTRE **IIC** where ideas grow



Organizing Partners

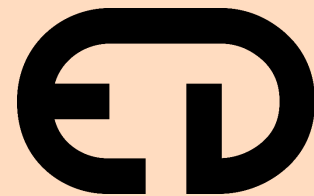
**C-CAMP**  
Centre for Cellular and Molecular Platforms

**gian**



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

**Portable and Minimally Invasive Device to Treat  
Pneumothorax, Hydropneumothorax and Hemothorax**



**EnthuDes Design Private Limited**  
FITT, IIT Delhi

**EnthuDes Design**

## PleuraGO

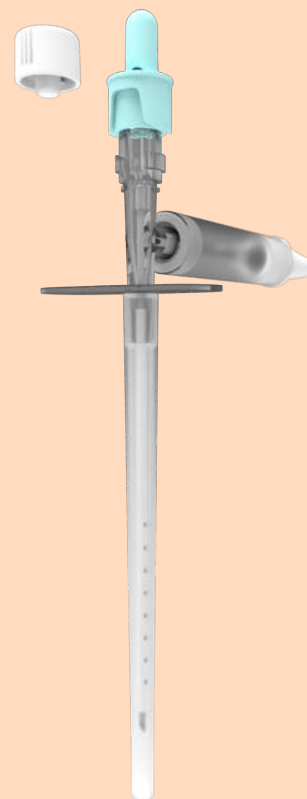
PleuraGO addresses the significant challenges posed by pneumothorax, hydropneumothorax, and hemothorax, particularly in **resource-limited settings like India**.

These conditions, characterized by the accumulation of air, fluid, or blood in the chest cavity, can lead to respiratory distress and even death.

Traditional treatment methods often require **hospitalization, invasive procedures, and prolonged recovery times**.

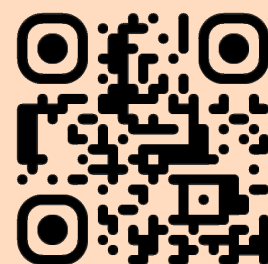
PleuraGO aims to provide a **safe, effective, and minimally invasive alternative, enabling quicker recovery and reducing the burden on healthcare systems**.

- ✓ **Reduces Healthcare Disparities:** Brings quality care to underserved areas, promoting health equity.
- ✓ **Strengthens National Healthcare Security:** Improves population health, strengthens healthcare system, and boosts economy.
- ✓ **Empowers Healthcare Professionals:** Enhances professional skills and confidence, leading to better patient care.
- ✓ **Promotes Innovation and Economic Growth:** Fosters local medical device manufacturing, creating jobs and strengthening the industry.
- ✓ **Raises Awareness and Encourages Early Diagnosis:** Improves patient outcomes by promoting knowledge and proactive healthcare.



**TRL - 7**

Ready for Manufacturing  
and Clinical Trials



[www.EnthuDes.com](http://www.EnthuDes.com)



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Converting Waste into Agri inputs



Dr. Megha Saxena  
Ecochar LLP



### Problem Addressed



### Technology



### EcoChar Feed Additive



### Societal Impact



- Employment generation
- Reduces use of harmful chemicals
- Reduces cost on agri inputs

### Current status



- Conducting trials at BHU, Varanasi
- Growth stimulant activity testing
- Pest control study on different pathogens



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## C012 Digital Water Quality Analyzer

**Robin Singh**  
**Founder & CEO**  
 CLUIX Private Limited



### Problem Addressed

The problem being addressed by CLUIX is the inefficiency and limitations of traditional water quality monitoring methods, which are slow, expensive, and require extensive technical expertise and training. Manual field test kits are prone to human error, making them highly unreliable, while the lack of real-time data hinders timely decision-making. This leads to unsafe drinking water, inefficient resource management, and increased environmental damage.

### Technology

The water quality analyzer relies on rigorous calibration and statistical validation for accurate analysis. Colorimetric measurements use the Beer-Lambert Law to relate color intensity to pollutant concentration. Precalibrated curves from standard solutions determine unknown sample concentrations. Light scattering measurements assess turbidity, while conductivity measurements determine ion concentration and total dissolved solids. Automated titration methods record parameters to minimize errors and calculate hardness and alkalinity. Quality control measures, including inter-laboratory testing and statistical process control, ensure consistent and reliable results.



The C012 uses specific reagents for accurate multi-parameter water analysis



Production level scalable design



Dual beam dual sensor photonics for multi-technique multi-parameter analysis

### Societal Impact

The C012 water quality analyzer improves drinking water safety by enabling real-time contaminant detection, reducing disease risks, and enhancing public health. It optimizes resource management, minimizes water wastage, and ensures equitable access to clean water, especially in underserved communities.

### Current status

Launched in August 2024, the second-generation C012 water quality analyzer provides reliable monitoring of 12 key parameters, including iron, lead, TDS, FRC, fluoride, copper, conductivity, turbidity, hardness, alkalinity, pH, and nitrate. New parameters such as phosphate, sulfate, and ammonia are being added, reflecting our commitment to advancing water management for safety and sustainability.





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

**DHIVARA MITRA – An IoT ENABLED & SOLAR POWERED SOLUTION FOR ENHANCED PER CUBIC METER HARVEST**



**ThinkRaw Innovative Solutions**

**KIIT-Technology Business Incubator**



## Problem Addressed

- ✓ High morbidity/Low survival rate problem in fish & prawn stock in aquaculture
- ✓ Lower than optimal level of production from fish & prawn farms
- ✓ Involved drudgery and dependency on human labour to be engaged in the farms
- ✓ High expense of diesel usage for paddler based aeration process, where used
- ✓ Uneven growth of fish & prawn stocks and feed wastage due to the dispersal being carried out manually

## Technology

- ✓ An integrated IoT enabled and solar powered navigable solution to provide the right ecosystem for the proper growth of fish and prawn farming
- ✓ Uniform distribution of Feed
- ✓ Maintaining uniformity in Dissolved Oxygen (DO) and pH value of farm water across the pond
- ✓ Lowering diesel usage to a minimal level
- ✓ Lower dependency on human labour



## Societal Impact

- ✓ **Improved Annual Income**- Helps improve the harvest quality and quantity, which results in enhanced revenue.
- ✓ **Women Empowerment** –The solution helps make the process easier for female farmers and promotes women entrepreneurs in the aquaculture sector.
- ✓ **Employment Generation** – Helps generate employment in rural and remote areas
- ✓ **Environmental Effect**- Clean energy power source to carry out key farming processes

## Current status

- ✓ Final market ready version of DhivaraMitra has been developed
- ✓ 8 units of DhivaraMitra has been deployed at the ponds of NABARD supported FPOs and an individual farmer in Odisha, India
- ✓ Solution patent and design registration certificate have been obtained
- ✓ DhivaraMitra has been registered under Mukhyamantri Matshya Sampada Yojana in Odisha



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## MILDCARES



**Mrs. Rachna Vyas**  
Co-Founder, Mild Cares

**Mr. Sandeep Vyas**  
Founder & CEO, Mild Cares

**MILDCARES**<sup>®</sup>  
Health | Hygiene | Happiness

### Problem Addressed

MildCares is solving problems in women's health & hygiene, dedicated to providing innovative, safe, and eco-friendly solutions. Our mission is to empower women by offering products that promote health, sustainability, and confidence. We are committed to replacing traditional hygiene products with superior alternatives, contributing to a healthier planet and lifestyle.

### Technology



Period Care

Toilet Hygiene

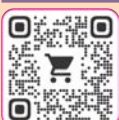


### Societal Impact



### Current status

- Growth stage
- 0.5 Million Brand users
  - 1 Million women impacted
  - Awarded by NHM for making India's first sanitary waste free Village



Web: [www.mildcares.com](http://www.mildcares.com)  
Follow us on | | mildcaresofficial

Contact :+91 989-909-5800  
Email: [reachus@mildcares.com](mailto:reachus@mildcares.com)

# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Automated microscopy platform with AI-assisted disease diagnosis



**Ayukriyam Innovations**



### Problem Addressed

#### Microscope - based disease screening

##### Human Error



##### Screening Large population



##### Diagnostic Accuracy



##### Deployability



### Technology

#### Autostain Automated Sample preparation & staining platform



- Process 4 samples at a time
- Uniform smear preparation & uniform staining
- Shorter TAT
- Scalability
- Currently, at pre-clinical trials for cervical cancer screening

#### Autoscope AI - assisted slide scanner for disease diagnosis



- Acquires high resolution images for 4 slides /run.
- Automated scanner covering 15mm x 15mm
- On board compute for identifying the abnormalities in the acquired images
- Images & report can be uploaded to cloud for approvals & access



### Societal Impact

- Platform Technologies – extendable to other diseases
- Early Disease Detection
- Mass Screening
- Easy Deployability at Primary health centers
- Digital Archiving
- Remote Pathologist's Expert opinion / Telemedicine

### Current status

- TRL - 5/6** : Early - stage Validation. Currently, at pre - clinical trials for cervical cancer screening
- Supported by** : IIT - Delhi, ICMR - MDMS (for clinical validation)
- Clinical partners** : Safdarjung Hospital, Delhi  
NICPR, Noida





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## WREN, BLUETAIL



LARKAI HEALTHCARE



### Problem Addressed

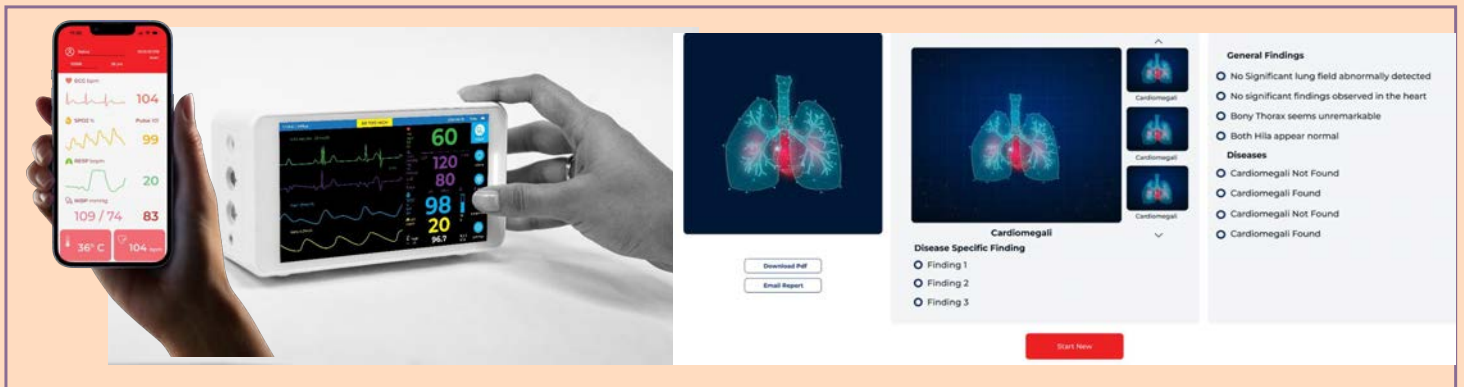
Larkai Healthcare is working to bridge the healthcare gaps of delayed diagnosis, missed interpretations, misinterpretations, time gap delay between diagnosis and treatment, lack of predictive diagnosis, dependency on highly invasive, inaccessible, expensive gold standard diagnostic tests.

### Technology

**WREN**, is an IoT based multiparameter smart monitor that is lightweight and works seamlessly in healthcare facilities. Using the integrated QR supported mobile application the reports can be transferred to the doctor that enables remote monitoring.

Wren Realtime is the streaming product that empowers the doctor to monitor the vitals of the patient in real time from miles away.

Bluetail is the AI Powered SaaS platform that uses the power of computer models, machine learning and technologies to detect diseases from multimodal correlation.



### Societal Impact

At Larkai Healthcare, we combine environmental responsibility, community involvement and medical advancements. We focus in making healthcare accessible so that no one is deprived of getting quality treatment. We are trying to eliminate the invasive gold standard diagnosis to eliminate the inconveniences caused to the patients. We have touched 1Mn lives and our mission is to reach 1B people.

### Current status

We have successfully launched 3 products and have deployed 2 products.

The AI powered SaaS platform is under clinical validation in collaboration with NHS Leeds.

WREN and Bluetail have gained their respective CDSCO test approvals.





# PEOPLE'S FESTIVAL OF INNOVATIONS 2024



## Drone Tech and AI

### Vyomchara Pvt. Ltd.

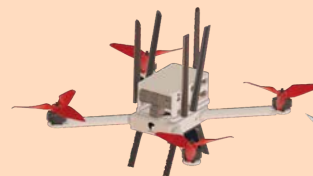


#### Problem Addressed

- Inefficiencies in data collection, monitoring, and surveying in mining, agriculture, and disaster management.
- High operational costs and time-consuming manual processes.
- Limited scalability and accuracy due to reliance on traditional methods.

#### Technology

- Advanced modular drones with customizable payloads.
- Integration of AI-powered automation and real-time data processing.
- Cutting-edge features like hyperspectral imaging, LiDAR mapping, and thermal sensors
- Autonomous flight capabilities tailored to industry-specific needs.



#### Societal Impact

- Enhances efficiency and accuracy in mining, agriculture, and disaster management.
- Drives sustainable growth through smarter, AI-driven solutions.
- Empowers industries with real-time decision-making capabilities.

#### Current status

- Deployed across mining, agriculture, and disaster management sectors.
- Ongoing innovation focused on AI automation and expanding into defense and environmental applications.



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Tsaak Eco friendly solar dryer made in India, designed by a specially-abled person



**Neha Upadhyaya**  
*Founder*



### Problem Addressed

- Farming related drudgery in women in cultivation, sorting, grading and drying
- Weak bargaining power of women and delay in remuneration due to unfair market practices involving middlemen and local markets
- Lack of market linkages for selling organic produce within India
- Competition of organic products from imported products
- Lack of access, affordability and awareness for clean energy applications for post harvest management and cooking

### Technology

- Portable, mobile, women-friendly, solar dryers
- Once can easily spread the trays under the apricot tree, collect and dry them
- Once dried, they can use it as portable store room and easily shift them indoors during snow, winds etc.

We have Recently introduced

### Solar technology in Eco-Model village Takmachik

which includes portable and low cost solar dryers for hygienic and efficient post harvest management of organic produce

In one year, use of solar dryers will reduce 436 kgs of carbon emissions

### Societal Impact

Reversed Migration in Villages from 27 to 75 households, enhanced livelihoods by 33%, no middle men between farmers and buyers, maximized women participation

### Current status

Developed eight eco villages and working on Technology dissemination and expansion to Karnataka and Himachal Pradesh



# PEOPLE'S FESTIVAL OF INNOVATIONS 2024

## Safest Passengers Vehicle



**PAPPU KUMAR MIRDHA**  
Frequency Automobile Pvt Ltd.  
ACIC IIT (ISM) Foundation Dhanbad



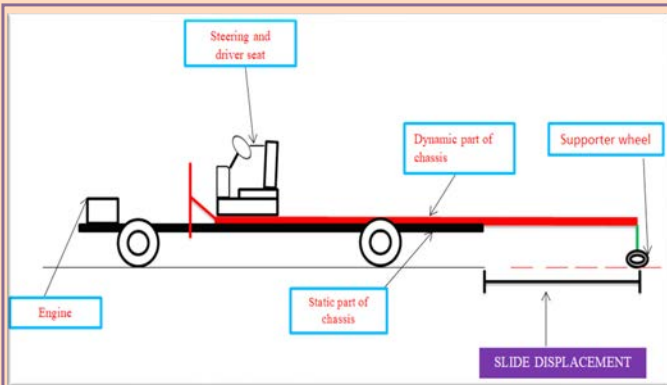
### Problem Addressed

According to WHO 1.25 millions People die in Road Crashes each year on average 3,287 Deaths a day . In which the maximum cause of vehicle Accident is COLLISION.



### Technology

**Innovation:** Frequency Automobiles are bringing the world **first SLIDE back concept in the passenger vehicle** segment. For saving the life of passengers during the crash . The concept is that at the time of crash just body of vehicle will be back and only front chassis will be affected during crash. **In concept the vehicle chassis model is an innovative lick telescopic channel.** One part will be joints with wheels, another other part joint with the body of the vehicle. Due to which vehicle of body [IN PASSENGERS SETTING] will be SLIDE back according to crash energy. Example if crash energy is 50 % then the body of the vehicle slides back 50%



### Societal Impact

As we can see the data of Road Accidents . So our innovations are going to revolutionize our society . Society will get the safest vehicle at an economic price



### Current status

**A Working Prototype .**  
It has been done on a crash test with a truck.  
**Selected by NITI Aayog .**  
**Patent has been published.**  
**Supported by the state govt .**







# Grassroots Innovations





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## The Clipper (Fruit tree safety holder)

**Ishfaq Ahmad Wani**  
Jammu and Kashmir



Innovation video

### Problem Addressed

The loss of fruits due to the branches not being able to sustain the weight of ripe fruits or get damaged and unbalanced due to snowfall, heavy wind, and rainfall.

### Technology

The mechanical Safety holder is an agricultural and horticultural invention designed to support fruit trees against, wind, rain, snowfall, and fruit load. The clipper is used to connect and balance the multiple tree branches at once. It holds them irrespective of the load it experiences. It grips the tree branches nicely so that at the same time, it can be used to shape the tree as per convenience.

This device helps save 4-5 boxes of fruits per tree. There are two types of holders available, break wire and rod type, both are durable and adjustable, providing multipurpose support for fruit-bearing trees.



### Societal Impact

Saves more produce by giving trees more support and preventing fruits from falling or touching the ground. Contributes to increasing farmers' production and income.

### Current status

Three Thousand units sold. There are three products under testing. A patent has also been filed.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Sunbot Innovations (Assistive Wearable Devices for Visually Impaired)

Suket Dipak Amin  
Gujarat



Innovation video

### Problem Addressed

Providing greater independence to the visually impaired by creating assistive wearable devices (smart glasses) to provide them with real-time information by translating visual information into an audio form in the desired language of users.

### Technology

The assistive wearable device (SMARTON) translates visual information into audio for the visually impaired. Using AI and edge processing on smartphones, the device provides real-time information, enhancing independence and reducing reliance on others. It helps users navigate their surroundings and complete daily tasks with confidence.

Its features are:

- Object Detection
- Currency Detection
- Text Reading



### Societal Impact

SMARTON has impacted over 5000 visually impaired individuals by empowering them with greater independence and confidence. SMARTON's goal is to impact over 100,000 blind and visually impaired in the next three years and have a global presence.

### Current status

Sunbots Innovations has sold 5000 products in Gujarat, Maharashtra, Madhya Pradesh and Telangana. It has its own SMARTON mobile app which can be used with or without glasses. A patent has also been filed.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Earth Tatva

**M. W. Shashank Nimkar**  
Gujarat



Innovation video

### Problem Addressed

Earth Tatva works to reduce the mining of natural resources by up to 60 percent by recycling post-industrial fired ceramic waste into a ceramic material. By re-using ceramics that do not biodegrade for centuries, Earth Tatva aspires to achieve zero-waste manufacturing, adhering to the principles of the circular economy.

### Technology

Earth Tatva procures post-industrial fired ceramic waste and uses it with pure clay that acts as a natural binder. It works with mono-material, which one can use for many production cycles without downgrading its quality. On the contrary, it keeps getting better. The material has also been tested by the Ceramic Research Institute. These materials are 35 per cent stronger as per the reports.



### Societal Impact

Earth Tatva can develop any product from waste material. Though ceramic does not affect ecology adversely, it just lies there like a dead weight, unutilized. Earth Tatva is solving this massive waste problem.

### Current status

They have started with making recycled ceramic tableware. These are 100% food-safe, as the team does not use any heavy metals for their glazes. More than 1200 products sold. They have a patent granted.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Manure Spreader Machine

Late Ashik Gani  
Gujarat



Innovation video

### Problem Addressed

The traditional process of manure spreading has many drawbacks since the labour requirement and costs are high, taking more time and effort to complete the work. Traditionally, if any farmer wants to spread farmyard manure on their farm, they need help from the service provider who comes with their tractor, trolley, and labour. They pick manure from the farmer's dumpsite and make piles in the farms. Afterward, farmers need to spread piles in the field. The innovator came up with a machine that can do both operations simultaneously to save farmers time, money and effort.



### Technology

The machine is a trolley-type machine made of a hydraulic system. It has a control wall, panel box, hydraulic motor, oil pump, gearbox, etc. To operate the machine, the trolley has to be attached to the tractor, then the PTO joint has to be installed. A battery wire is provided in that trolley which has to be connected to the tractor battery and the remote control has to be given to the driver.

Fertilizer is loaded into the machine using a JCB or Loader. Once in the field, the PTO joint is turned on. The remote control has four switches: two to raise and lower the rear gate and two to move the fertilizer forward and backward. After loading the fertilizer, the gate is opened first, followed by pressing the switch to reverse the fertilizer. The tractor is started in the first low or second low gear. As the tractor advances, the fertilizer is spread evenly. Once the fertilizer is emptied, the remote control is used to lower the rear gate, and the machine is reloaded.

### Societal Impact

This machine helps farmers to save labour costs, time, and the amount of fertilizer used in the field along with increased yield of crops. They can now sow the grains on the same day as applying fertilizer which is impossible to do manually. The manure spreader machine efficiently spreads fertilizer, preserving its quality and enhancing soil fertility.

### Current status

The unit Cost of manufacturing this machine is Rs. 5,12,000/- including labour, energy, and other costs. Twelve to fifteen units can be manufactured every month. It has a patent granted.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Mobile Groundnut Pick Up And Threshing Machine

Sanjay Dhirajlal Tilva  
Gujarat



Innovation video

### Problem Addressed

Reducing the time and labour required for the threshing of groundnuts. For example, threshing two acres of groundnut crop requires 10-12 laborers. The cost of the labor per day is Rs. 400/-. So, for two acres of crop the cost comes up to Rs. 4000 to 4800/- per day. Automating the process reduces labor requirements, lessen the cost and time for the farmers.

### Technology

The pickup and threshing machine can be attached to the tractor. It can collect the groundnut and do the threshing, separating the groundnut from the fodder, and also re-pickup the uncrushed material left. It lifts the dugout crops and automatically threshes them. There are separate storage compartments for groundnut shells and leaves. Thus, it can do threshing and also keep the farm clean. This machine can be operated non-stop as long as the weather is dry and sunny and there is no moisture. Having sold three of these machines, it was noticed that the tiny twigs or waste material was not yet getting completely separated from the nut. For this, a destoner machine is also in the process of being developed.



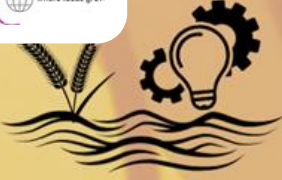
### Societal Impact

Making the process fully automatic with no labor requirements saves time, cost, and effort on the part of the farmers.

### Current status

Three machines have been sold and trials are ongoing for further improvement. The machine costs Rs. 11,50,000/-. A patent has also been filed.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Multiple Fruit Grader Machine

**Naik Qayoom**  
Jammu & Kashmir



Innovation video

### Problem Addressed

Building a more efficient and less labour-intensive technology for fruit grading.

### Technology

The multiple fruit grading machine has an adjustable grading section which makes it versatile to be used on different fruits, even on walnuts which is the smallest. Currently, no other solutions like this exist. This eliminated the need for having different grading machines for different fruits. The machine has a rolling section that cleans the fruit first and then grades it. Design improvements have also been made. Earlier to operate the machine, the operator had to bend but with the addition of a foot lever, now operating is easier. Another add-on has been added for the segregation of damaged and diseased fruits. This works based on an AI module available separately for Rs. 20000.

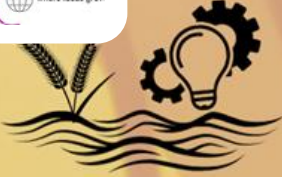


### Societal Impact

This machine will empower growers with a cost-effective solution that enhances the value of their harvest without imposing financial burdens. By embracing this technology, farmers can not only enhance the market value of their harvest but also contribute to a safer and more sustainable food production process. Automation of the grading process will make farmers' lives easier and more comfortable.

### Current status

Not being able to go into production due to funding issues



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## BiliSURE (Device for neonatal bilirubin level measurement)

Jitesh Pandey  
(Uttar Pradesh)



Innovation video

### Problem Addressed

BiliSURE addresses the critical problem of delayed and invasive bilirubin measurement in newborns. Traditional methods often involve painful blood tests, causing delays in identifying jaundice. This delay can lead to severe health complications, including brain damage.

### Technology

BiliSURE is an innovative non-invasive device that measures neonatal bilirubin levels through the skin's response to multi-spectrum light. The device consists of a sensor module that emits and detects light signals. When the light interacts with the skin, it reflects and absorbs, revealing bilirubin concentrations. These readings are processed using our proprietary algorithms to provide accurate bilirubin levels in real-time. This eliminates the need for painful blood tests, ensuring timely and accurate jaundice detection. This user-friendly solution enhances neonatal care outcomes while reducing the risk of complications and readmissions.



### Societal Impact

BiliSURE's impact goes beyond accurate measurements; it ensures early detection, timely treatment, and improved quality of life for newborns and their families. It significantly reduces the dependency on highly skilled healthcare professionals for bilirubin measurements, leading to optimized labor allocation and cost savings in healthcare facilities, especially in resource-constrained areas where trained staff may be limited.

### Current status

As of November 2024, Medblue Innovations has successfully deployed three Bilisure devices in healthcare facilities across India. These installations have enabled over 1,000 newborns to receive non-invasive jaundice screenings, facilitating early detection and timely intervention. They are actively working to expand their reach and increase the number of installations in the coming months.  
Patent Details: Applied





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Valved Asthma Inhaler

Arvind P  
Tamil Nadu



Innovation video

### Problem Addressed

Addressing issues with traditional inhalers, Valved Asthma Inhaler tackles synchronization and efficiency challenges.

### Technology

The innovation is a passive asthma inhaler that synchronizes the airflow inside the inhaler and the release of medication, and ensures the proper mixing of air and medicine. It comprises a lever mechanism, a valve, a loaded spring, and a single air passage. The lever mechanism effectively coordinates the opening of the valve and the airflow with the medication release. The closed valve creates a negative pressure region during inhalation by the user. Upon activation of the canister, the lever mechanism and loaded torsional spring swiftly prompt the valve to open. These combined actions enhance the overall drug delivery efficiency of the inhaler.



### Societal Impact

This asthma inhaler not only eliminates the time lag between inhalation and medication dispersion but also ensures seamless mixing of medicine with air, thereby enhancing the inhaler's efficacy will help countless asthma patients. This solution is also more cost-effective with unit cost being just Rs. 180/-.

### Current status

Has not yet undergone clinical trials or received official medical approval from the government. Mankind Pharma had offered to conduct free testing of our working prototype at their state-of-the-art R&D center. Direct feedback from end-users is yet to be obtained. Patent Details: Indian and US patents filed





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## PhysioMize

**Yash Parkhi**  
Maharashtra



Innovation video

### Problem Addressed

To provide easily accessible and affordable physiotherapy treatment.

### Technology

The device seamlessly integrates cutting-edge 3D joint simulation technology with advanced motion tracking, allowing for enhanced remote physiotherapy. It accurately records joint angles, pain localization, and range of motion. The immersive 3D joint simulation allows patients to engage in therapeutic exercises while the device accurately records their movements. This enhances the accuracy of data and allows physiotherapists to have a more detailed understanding of patients' performance during sessions.



### Societal Impact

The device enables remote physiotherapy sessions, overcoming geographical barriers and making healthcare more accessible. The real-time feedback allows physiotherapists to track patient performance and adjust treatments accordingly.

### Current status

It is currently in the R&D Stage. To provide comprehensive support for various physiotherapy exercises, the software needs to be developed further to include all intended joints.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Low-power cold storage solution for fruits and vegetables

**Vishal Singhal**  
Telangana



Innovation video

### Problem Addressed

Vishal aims to solve the problem of fruit and vegetable wastage, which amounts to more than Rs 1 lakh crore every year in the country due to a lack of cost-effective cold chain facilities. This directly reduces farmer incomes, erodes their bargaining power, and forces them to sell their produce at throwaway prices. It also lowers availability and causes higher prices for fresh produce in urban areas.

### Technology

Vishal and his team have developed a new cooling technology, called dew point cooling. This technology consumes 80 per cent less energy than refrigeration systems to cool to the desired temperature range to store fruits and vegetables. Dew point cooling uses indirect evaporation to cool close to the ambient dew point temperature and much below the wet-bulb temperature. For the ambient conditions of 40°C temperature and 30 per cent relative humidity, it cools to 22°C directly without any refrigeration system. It can convert any regular room into a cold storage room. They have developed a heat and mass exchanger made of plastic instead of metal to reduce product price. Temperature can range between 18-25°C.



### Societal Impact

This innovation increases farmers' income by decentralizing the post-harvest solutions such as cold rooms and increasing the shelf life of fruits and vegetables by 3-5 times.

### Current status

They have done 27 installations and their clients are satisfied with the product mainly because it keeps fruits and vegetables fresher for longer, and maintains crop weight. Out of the four applied patents, they have been granted two as of now.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Rim With Suspensions

Mitesh Rasal  
Maharashtra



Innovation video

### Problem Addressed

Improvements in the quality of life of wheelchair users and reducing the risk of back injuries and discomfort due to wheelchairs lacking suspensions

### Technology

RUT3 has created an innovative wheel called the Damsus wheel. It has integrated suspension inside the wheel. It is a multi-axis suspension system that provides comfort [reducing back injuries], safety [taking impact from the front during accidents], and efficiency [forward movement helps to reduce the efforts to drive]. The conventional spokes are replaced by a suspension system inside the rim. When traveling over an uneven terrain the flexible ellipse expands and compresses providing suspension action and when it gets back to its initial position it provides forward movement reducing efforts to ride.



### Societal Impact

The innovation impacts people with physical disability and mobility issues and their movements on every terrain. It has the potential to drive the automobile industry into a new generation of safety wheels, reducing the risk of losing life, inducing back injuries, and also making the vehicle efficient. The product addresses issues like spine/back injuries, and safety during accidents. The comfort of these wheels enables people with limited mobility to travel over any terrain creating a huge impact on their lives.

### Current status

Sold 270 products to the Gov. of Maharashtra and also sent a proposal to the Department of Social Justice and Special Assistance, Maharashtra for 15,000 wheelchairs. Patents have been granted in both India and the US.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Able Glasses for deaf, mute and blind

**Pratik Raghuwanshi**  
Maharashtra



Innovation video

### Problem Addressed

Able Glasses is solving for the large number of deaf, mute, and blind population to listen and see the world at an affordable price.

### Technology

Able glasses enable the deaf to hear sound by using a patented dome bone conduction transducer which is 98 percent less in weight and 95 per cent power efficient. Using their bone conduction technology, the deaf can hear conversations and ambient sound. Their Integrated AI translates sign language into spoken audio. For the blind, image processing creates audio descriptions of their environment. Able Glasses is a non-surgical and non-adhesive type smart hearing aid for conductive and mixed type hearing loss. Its double battery life reduces the weight of the glasses making it comfortable for users to wear all day long without worrying about recharging and weight fatigue.



### Societal Impact

It breaks the social stigma around wearing hearing aids in public and helps a large number of people in need of affordable listening and visualizing solutions. This device also helps these people become more independent and able to earn a livelihood.

### Current status

The product Able glasses is in the minimum viable product stage and after August it will go for clinical trial. They have also developed the Able Assistant app that complements the glasses by providing users with a suite of hearing health resources and features. Launched recently on the Android Play Store, the app includes a hearing screening test graded by WHO standards, a virtual audiologist powered by AI to answer hearing care questions 24/7, and real-time subtitles that convert speech into text for easier conversation comprehension.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Golden Feathers

**Radhesh Agrahari**  
Rajasthan



Innovation video

### Problem Addressed

The innovator identified the issue of disposal of chicken waste, which often finds its way into rivers, leading to water pollution and health hazards, especially in desert regions.

### Technology

Through its innovative processing and production technology Golden Feathers, converts chicken butchery waste, mainly feathers, into natural fabric, transforming textiles and paper. The organization collects butchery chicken waste from local slaughterhouses to use as raw material. To ensure hygiene and quality, they employ 27 natural sanitization processes to sanitize the waste.

They also convert chicken waste into superior wollen fibre. Their feather wool is used not only for textiles but also for crafting this eco-friendly paper.



### Societal Impact

The organization has generated livelihood opportunities and has impacted the lives of 200+ tribal women paying them 20 times more than average, up-skilled 375+ semi-skilled/Unskilled workers and empowered more than 2000+ tribal women through Handloom activities. This process technology helps in significantly reducing carbon footprint. Merging the ancient 2500-year-old art of weaving with modern commitments to sustainability and design. It redefines the traditional Indian textile experience.

### Current status

They have sold 5000+ units.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## METAL (Molecular Magnetic Technology for Arsenic Removal)

Arpit Kumar  
Karnataka



Innovation video

### Problem Addressed

Tackling Arsenic contamination. Arpit recognized the urgent need for effective arsenic removal technologies, particularly in rural areas where access to safe drinking water was limited. Arsenic contamination of drinking water is invisible, tasteless, and odorless, and the effects of ingestion are not apparent in the short term. Continuous exposure to arsenic dramatically increases the risks of morbidity and mortality from cancers and heart, lung, kidney, and liver diseases that are not necessarily preceded by arsenicosis.

### Technology

METAL (Molecular Magnetic Technology for Arsenic Removal) leverages Molecular Magnetic Treatment to address arsenic contamination in groundwater. It employs an external magnetic field to induce magnetic susceptibility in arsenic-containing compounds, facilitating their extraction from water. The process involves the application of a targeted magnetic field, which aligns and isolates the arsenic molecules, enabling their removal through subsequent filtration or separation techniques. This method is eco-friendly, requiring no chemical additives, and is designed to be low-maintenance and user-friendly.



### Current status

The technology has been implemented in regions with high arsenic prevalence, notably in Bihar, India. Their Minimum Viable Product (MVP) has successfully treated 300,000 liters of water during pilot trials, directly benefiting 2,300 children across nine schools. This achievement is backed by approval from the Jal Shakti Mantralya and is available on India's Government e-Marketplace (GeM). 30 Unit Order from SBI CSR and 2 Units from Rotary Club and two Units from Water Aid, as of now. By 2028, they aim to deploy METAL® technology across India, Asia, and Africa, reaching municipal, commercial, and residential users. The units, spanning from community-scale to large-scale, underscore the adaptability of the technology and facilitate its integration into diverse societal settings, thereby creating positive impacts and enhancing awareness in the broader community towards water conservation.

### Societal Impact

This achievement has directly improved water quality and provided safer and healthier water for communities previously exposed to arsenic-contaminated water. Recognizing the importance of sustainability, Arpit has prioritized developing a solution that is eco-friendly, cost-effective, and requires minimal maintenance.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Castor Oil-Based Polyurethane Urea Polymer

**Bambhaniya Sanjaybhai Babubhai Gujarat**



Innovation video

### Problem Addressed

The traditional reliance on petrochemical-based polymers for architectural fabrics poses significant environmental challenges. By eliminating the reliance on petrochemical-based polymers, this eco-friendly innovation not only contributes to environmental preservation but also caters to the specific requirements of the Indian army, sports authorities, exhibitors, and economically disadvantaged populations.

### Technology

The innovation involves the careful synthesis of a castor oil-based polyurethane urea polymer. Castor oil, a renewable resource, serves as the primary building block for the polymer, ensuring a sustainable and environmentally friendly foundation. This novel polymer is then expertly coated onto high-tenacity fabrics, including polyester, nylon, fiberglass, and kevlar, creating a robust and durable composite material. Other chemicals for polymer synthesis include the isocyanates, chain extenders, catalysts and solvents.



### Societal Impact

By creating affordable and sustainable options for shelters, the innovation addresses the needs of economically disadvantaged populations, providing a dignified living environment. The adoption of biomass-based architectural fabrics contributes significantly to environmental preservation by reducing the carbon footprint associated with petrochemical-based alternatives.

### Current status

Have developed three PUU-coated fabric variants: one with polyester for general shelters, one with fiberglass for permanent structures, and one with Kevlar for cut resistance. All variants are fire-retardant and UV-resistant, ensuring high durability. The next steps involve fine-tuning these products and preparing for scaled production to meet diverse market needs. Patent Details: Granted (202321003005)



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Eco-Wood from Lantana

**Dr. Binish R. Desai**  
Gujarat



Innovation video

### Problem Addressed

Converting Lantana Camaran an invasive species into eco wood while helping tribals. Lantana is one of the world's ten worst invasive species and a species of high concern for India. It competes with native plants for space and resources and also alters the nutrient cycle in the soil. This invasion has resulted in the scarcity of native forage plants for wild herbivores.

### Technology

Removal of Lantana from 75 acres in the villages outside the Mudumalai Tiger Reserve. Converting this cut Lantana to plywood as a way of up-cycling. The material is Environmentally friendly and 100% recyclable, strong and durable, compatible with laminations, fire, and pest Resistant, has natural thermal insulation, and is suitable for all weathers.



### Societal Impact

A circular economy project that can be scaled anywhere there are invasive species and lead to a sustainable habitat restoration project. Creating a market for the use of this widespread invasive species and employment to men and women in the region. Creating a community-based conservation network to map critically endangered vultures in the area and as stewards to this population.

### Current status

Recently, made a table top and are taking trials on the wooden flooring. They have sold 780 pieces of different lantana products, for furnishing and gifting till date. The current constraint is to make the material more accessible and spread education to the tribes for them to start treating lantana as an asset for which an incentive program is being created to buy material from the tribes. Patent Details: Patent for the Binding material.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## FASAL AMRIT (EF Polymer)

Ankit Jain and Narayan Lal Gurjar  
Rajasthan



Innovation video

### Problem Addressed

The innovator Narayan Gurjar's family has faced crop losses due to water stress in Rajasthan. Narayan once lost his entire maize crop due to water scarcity. To tackle this problem, Narayan started experimenting with various natural material like plant bio waste to see how more water can be retained in farms.

### Technology

Fasal Amrit is a natural soil conditioner made from fruit peels sourced from fruit processing industries and is processed using patented technology. Fasal Amrit granules can absorb water up to 100 times their weight, retaining water from irrigation or rainfall and preventing fertilizer leaching. The product releases water based on plant needs, improves soil structure, increases nutrient availability, and promotes healthy root growth. It is entirely organic, 100 percent biodegradable, certified, and suitable for all plants. Its application increases farmer income by 30 per cent by cutting down water requirements by 40 per cent and fertilizer application by 20 per cent, leading to a 40 per cent increase in yield.



### Societal Impact

The innovation enables farmers to grow more crop in less water, leading to an increase in yield. Fasal Amrit also acts as a shield for crops during unforeseen drought conditions, and also absorbs excess water during high rains which prevents stem rot in crops. Thus it protects farmers from the impact of extreme weather events.

### Current status

Fasal Amrit is now present in more than 7 states and multiple countries. 222 Metric Tonnes of Fasal Amrit has been sold globally. It has successfully gained the trust of 10,000+ farmers and improved the quality of 8000+ acres of land while saving 80 crore litres of water. Most importantly, Fasal Amrit users have generated additional Rs. 5.4 crore in income.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Fully Automatic Cotton Wick Tapper Machine

**Prakashbhai Rameshbhai Vala**  
Gujarat



Innovation video

### Problem Addressed

Providing more independence and earning opportunities to people with handicaps.

### Technology

Automatic machine, easy to handle and capable of manufacturing 40,000 units or 4 kg of cotton wicks/day. It has remarkable efficiency through continuous operation, minimizing downtime and maximizing output.



### Societal Impact

Making disabled people more independent. Creates earning opportunities for handicapped people. This machine also improves the quality of the product.

### Current status

Due to lack of funding and capacity not being able to meet the existing demand.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## CASE- Intelligent Cloud connected Battery Pack

**Darshan Nitin Meher**  
Maharashtra



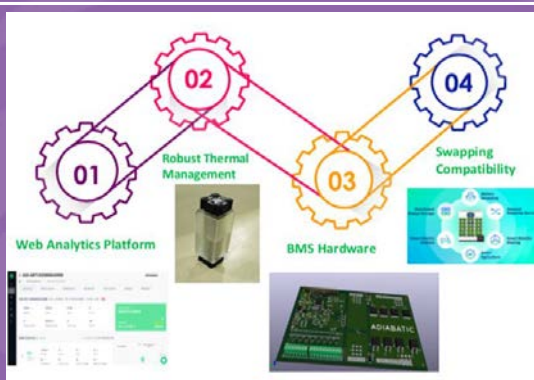
Innovation video

### Problem Addressed

Adiabatic Technologies ensures your battery pack in electric vehicles is monitored precisely to ensure the safety and efficiency of the battery pack. Evidently, the battery packs used are not compatible with the high temperature which is expected according to the Indian climatic conditions. There is constant anxiety prevailing among EV users regarding their batteries running out of charge mid-journey. The OEMs are unable to use their battery mileage to its full potential.

### Technology

"CASE" is an Intelligent Cloud connected battery pack with a novel Phase Change Material (PCM) based thermal cooling system which is integrated with the in-house designed intelligent Battery Management system (BMS) while complying with the new norms for battery packs in India. With the help of predictive Machine Learning based algorithms, CASE can accurately predict the state of the charge (SOC), state of health (SOH), range, and state of functions (SOF) of the battery pack. The developed cell balancing technique helps in extending the life of the battery pack further by 50 per cent, hence reducing the total cost of ownership (TCO) of the battery pack by 33 per cent.



### Societal Impact

More than 1400 battery packs have been deployed on ground, covering more than 20 lacs green kms till date and have offsetted more than 160 million tonnes of CO2 from the environment.

### Current status

Have received a contract to deploy 5000 battery packs from two major Indian EV fleet operator. They have sold more than 1400 units. The innovation has been commercialized with revenues of more than Rs 25L. and the first manufacturing facility has also been established.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Multiple Drug Detector

**Kavya Mistry**  
Gujarat



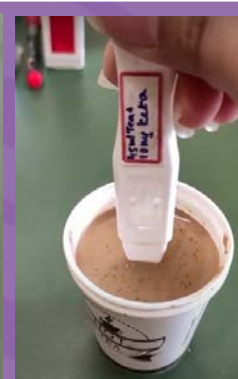
Innovation video

### Problem Addressed

There's an increase in cases of drink spiking being reported each day. These drugs are used to disable a person's sense of choice and alertness, making it difficult for them to notice or resist a potential sexual assault.

### Technology

"Kadam" is an initiative that prevents drug-facilitated crimes by providing early detection in terms of a personal safety device. It is a 3 component spiked drink detection system consisting of a strip to be dipped in the drink, an optional use lateral flow reader to detect the band formation on the strip and for product usage in places of reduced visibility like night clubs, and an app to interpret the result using trained artificial intelligence models. The product also has location-sharing features to saved contacts and on detecting spiked drinks, it will immediately send the location and result to the saved contacts. The reader is universal and can be used to interpret other such strips as well



### Societal Impact

"Kadam" empowers personal safety by providing early detection of spiked drinks.

### Current status

The product is in the R&D Stage. Patent is granted.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Zero Spillage Milking Can for Farmers

**Harshal Patil**  
Maharashtra



Innovation video

### Problem Addressed

Solving the issue of milk spillage during milking, which results in the wastage of milk.

### Technology

Dudh Rakshak is a milking can with an auto-locking system. When an animal kicks the can the blocking device blocks the flow line, preventing any spillage. The innovation is an affordable, simple solution for preventing spillage of milk.



### Societal Impact

Helps increase farmers' income due to less milk wastage.

### Current status

The product is currently undergoing field trials, and marketing strategies are in development.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Coconut Leaf Straws

**Prof. Saji Varghese**  
Karnataka



Innovation video

### Problem Addressed

Plastic Straws are one of the classic examples of single-use plastics, and a majority of these straws are made from Polypropylene. This material is harmful to nature. As a result, straws always end up in landfills or damage our oceans and marine wildlife. Prof Saji Varghese decided to create an eco-friendly product out of coconut leaves to solve this problem.

### Technology

A simple cleaning and steaming process brings out the natural healthy wax of the fallen coconut leaf to the surface. It makes the leaf antifungal and hydrophobic and easy to shape into straws. Straws can be made from the cuticles of pineapple leaves and pandanus leaves, offering significant benefits to growers of pineapple and pandanus. These straws are highly efficient and capable of remaining intact in beverages for over 100 hours. These straws have a shelf life of nine months and stay steady in beverages for more than six hours.



### Societal Impact

Along with eliminating the use of single-use plastics, it provides income-generating opportunities for women in coconut-growing regions of India.

### Current status

Over 5 million straws have already been sold. The innovation has been granted a patent in India and patent applications have been filed with the European Patent Office, the US, and Sri Lanka.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Handheld Spectroscopy Food Safety Device

**Harsh Rajput and Shreyas Bihar**



Innovation video

### Problem Addressed

The innovation addresses the pervasive issue of unsafe food consumption due to excessive pesticide use. Motivated by a personal health focus, the innovation aims to empower consumers and promote safer farming practices.

### Technology

The Food Safety Device employs advanced spectroscopy, measuring near-infrared and red light absorption in fruits and vegetables. By measuring light absorption, it detects pesticide levels, offering a non-destructive, cost-effective, and user-friendly solution.



### Societal Impact

This device caters to global concerns about food safety, providing consumers, farmers, and retailers with a tool to make informed choices. The innovation has the potential to revolutionize agricultural practices, contributing to a healthier and more aware society.

### Current status

The innovator has been focused on improving the accuracy of the device by refining the sensor design and optimizing data processing algorithms. Efforts have also been directed toward creating a more intuitive and user-friendly interface.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Automatic Feeding Machine

**Nabajit Bharali**  
Assam



Innovation video

### Problem Addressed

Providing increased independence to individuals with motor impairments, loss of hand function, or quadriplegia in feeding themselves.

### Technology

The automatic feeding machine detects a face within a six-inch range via sensors. A gear motor guides a spoon to scoop up the food placed on a plate. An activated sensor will carry it to the mouth of the user and stop when they move out of range. A controller circuit regulates speed for smooth operation. It works on either current or battery. Based on feedback about the prototype, The innovator also made it foldable and used one motor instead of two. This has reduced the cost of manufacturing. This innovation is fully automatic, requiring no switch or assistance. It works on either current or battery. Compared to its counterparts, it is portable, frugal, and user-friendly.



### Societal Impact

When commercialized, it has the capability to impact the lives of many

### Current status

Some of the prototypes have been distributed to physically challenged individuals, and their feedback has been collected. Based on the feedback, the prototypes are being continuously improved. The innovation is not yet commercialized.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Dextroware (Head wearable computer navigation device)

**Pravin Kumar**  
Tamil Nadu



Innovation video

### Problem Addressed

Dextroware Devices addresses the challenge faced by individuals with motor difficulties in using computers and phones.

### Technology

Through a series of assistive devices including glasses, finger triggers, foot pedals, and buttons, the user is given facilities similar to a mouse or trackpad. Based on a plug-and-play concept, the assistive tech can be paired with computers, phones, tablets, television sets, etc. They have developed a device called Mouseware. It is a head wearable device that enables the hands-free operation of computers and smartphones with simple head movements.



### Current status

The team has sold over 250 Mouseware devices, empowering individuals with upper-limb disabilities to access digital tools and opportunities more effectively. They are actively developing customizable control options to make Mouseware more adaptable for users with varying needs. Additionally, collaborations with international distributors, NGOs, and CSR initiatives have been expanded to enhance the accessibility of Mouseware. Project Samavesh, an ongoing initiative, aims to extend the reach of Mouseware by providing beneficiaries with training and job placement guidance, fostering greater independence.

### Societal Impact

The innovator has made the products affordable and user-friendly. The process of arriving at the innovation involved research within communities to understand the common obstacles, and address specific needs that are often ignored by most commercial technology. They market the product to those with chronic as well as temporary motor problems.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Suneel S1 Walnut Variety

**Suneel Singh**  
Jammu & Kashmir



Innovation video

### Problem Addressed

Increasing walnut yield and quality and making procurement easy.

### Technology

The Suneel (S1) walnut variety, developed through grafting, produces uniform, soft-shell walnuts that are high-yielding, pest-resistant, and organic. Each mature plant, 15-22 feet tall, yields 100-150 kg of walnuts with clusters of 9-15 fruits. Unlike conventional varieties that grow 50-55 feet and take 6-8 years to mature, Suneel S1 starts bearing fruit within 2-3 years, reducing risks during harvest. Bud grafting ensures a 98% success rate and higher productivity.



### Societal Impact

Better yield for farmers and more income.

### Current status

Working on walnut breeding. Planning to work on hazelnuts and pecan nuts as well.

Patent Details: Filed





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



Innovation video



## Kibo by Trestle Labs

**Akshita Sachdeva and Bonny Dave**  
Karnataka

### Problem Addressed

Kibo 360 Trestle Labs aims to assist individuals with low vision and blindness by converting printed, handwritten, and digital text into voice audio across all languages, offering a more organized solution. It also transcends language barriers.

### Technology

Kibo, an acronym for Knowledge In a Box. It is a tool that allows users to:

- Listen: printed, handwritten and digital content
- Translate: content across 60+ languages
- Digitize: download in searchable and editable formats
- Audio'tize: download in MP3 audiobooks

It provides kits for scanning documents and real-time translation, empowering individuals facing language or literacy barriers.



### Societal Impact

Kibo by Trestle Labs ensures that no school, college, or office denies or discontinues education/employment for anyone facing disability, language, or literacy barriers, especially when the individual is capable, but the ecosystem is not.

### Current status

Through Kibo 360, more than 1 lakh people have been helped to uplift their lives with solutions. This innovation has been commercialized and has been purchased by 600+ institutions in 22 countries.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



Innovation video



## Fusion Saree from Water Hyacinth

Gaurav Anand  
Jharkhand

### Problem Addressed

Converting a common aquatic weed into sustainable and unique handloom sarees, offering an eco-friendly alternative to traditional fabrics.

### Technology

First, the stems of the plant are collected and dried in the sun for a week. The soft cover of the stem is kept to make paper while the pulp is used to make fibre. Fibre from the stem is extracted after hot water treatment to remove insects from the pulp. These fibres are used to make yarn, which is then coloured. Weavers then weave the saree on a handloom. They need around 3-4 days to make one saree.



### Societal Impact

They work with women's self-help groups and provides employment for rural women.

### Current status

Over 1,000 sarees have been sold through online platforms, reaching customers in Delhi, Bangalore, France, Italy, and Dubai. He is also focusing on paper products.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## WHE-PLAST

**Neha Chaudhari**  
Gujarat



Innovation video

### Problem Addressed

Solving the problem of agricultural waste management like Paralli- which is burned every year causing air and land pollution. Hence, biodegradable materials made from renewable agricultural resources such as carbohydrates, starch, and proteins are attracting much attention for sustainable development and environmental conservation.

### Technology

Using agricultural waste Neha has created an alternative to plastic from Paralli called WHE-PLAST. The process includes a raw material collection that is waste wheat grains/paralli followed by pretreatment and starch extraction from the waste. Then a starch slurry is formed by the addition of plasticize, film forming agent, and a suitable solvent. Once the slurry of required concentration and property is obtained, a plastic film is prepared, which on drying gives a thin film of plastic. Plant proteins have the possibility for usage as films and plastics because of their abundant availability, low cost, biodegradability, and suitable properties like rheology, water sensitivity, sound absorption, thermal behavior, etc.



### Societal Impact

WHE-PIAST is set to bring a revolutionary change in the field of agro and plastic industries and how they deal with food waste. Being able to derive plastic from the agriculture field and storage wastage is a big achievement. This method of producing plastic from waste wheat using a hybrid process to utilize maximum wastage can be hugely impactful.

### Current status

The product is still in the R&D stage and is not yet commercialized.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## HOOK: Friction Drive Mechanism

**Priyank Dodhia**  
Maharashtra



Innovation video

### Problem Addressed

Making daily travel less exhaustive for people who use cycle daily such as delivery persons etc. to reach their destination because of distances, hilly terrain or slopes, lack of fitness, motivation & speed.

### Technology

HOOK uses the friction drive mechanism to propel the bicycle forward by a modular clipping mechanism with which you can attach and detach the product within seconds. The basic principle involves a motorized roller that comes into contact with the bicycle tire, transferring torque through friction to propel the bicycle forward. This method is different from chain-driven or hub motor systems, offering a simple and often more modular solution.



### Societal Impact

Converting existing bicycles to electric at less cost. Making opting for e-vehicles more accessible and affordable.

### Current status

MVP is ready. On-road testing is ongoing. They have also started to plan the production and are going to launch a pilot soon with Mumbai Dabbawalas and other food delivery platforms





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Crimeria Apple Variety

**Amir Abas Ganie**  
Jammu & Kashmir



Innovation video

### Problem Addressed

Creating a better apple variety with better fruit quality.

### Technology

The innovator developed the Crimeria apple variety by grafting a branch from a Crimson apple tree onto a Bulgaria apple tree. Crimeria apples are larger and bear more fruit than Crimson. Crimeria apple trees bear fruit within one to three years of planting. A single tree can yield about 200 kg of apples after five years. The trees begin flowering by April and produce fruits by August.



### Societal Impact

Farmers earn well from the in-demand Crimeria apples that sell at Rs. 80-200 per kg. The innovator claims that this variety is not disease-prone and reports minimal use of pesticides.

### Current status

The innovator has guided many farmers about grafting, within the district. He is yet to register it under PPV&FRA. He aims to export it outside Kashmir, and GIAN is supporting him in developing a larger market.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Saffron Processing Machine

**Tariq Ahmad**  
Jammu & Kashmir



Innovation video

### Problem Addressed

The current saffron processing method relies heavily on manual labor, resulting in time-consuming and labor-intensive efforts to remove the root part from each saffron flower. This labor-intensive process not only slows down production but also poses health risks to workers.

### Technology

The Saffron Processing Machine automates the process. It can process 1 kg of saffron in just one to two hours, a significant improvement over the manual method that can take an entire day for the same amount. The machine is designed with simplicity in mind, making it easy for operators to use and maintain.



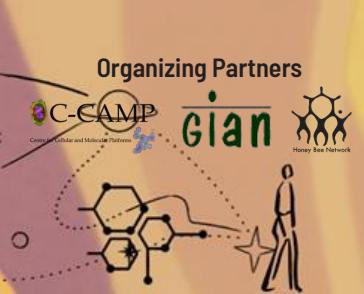
### Societal Impact

Reduces manual labor and increases saffron processing output by offering an affordable solution. Also improves working conditions and income of the workers.

### Current status

The prototype model of this machine has been developed and lab testing has been done. There is no saffron processing machine available in India. The innovation is yet to be commercialized. A patent has been granted.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Zyenika: Inclusive Fashion for All

**Soumita Basu**  
West Bengal



Innovation video

### Problem Addressed

Designing clothes that make dressing easy, comfortable, quick, and painless, for everyone including people with chronic or temporary disabilities and the elderly

### Technology

Design (re)thinking takes centre stage, using already available material to deliver different openings and shapes which are more adaptive. These garments incorporate features such as magnetic closures, Velcro fastenings, and strategically placed zippers, enabling ease of wear for those with limited dexterity or mobility.

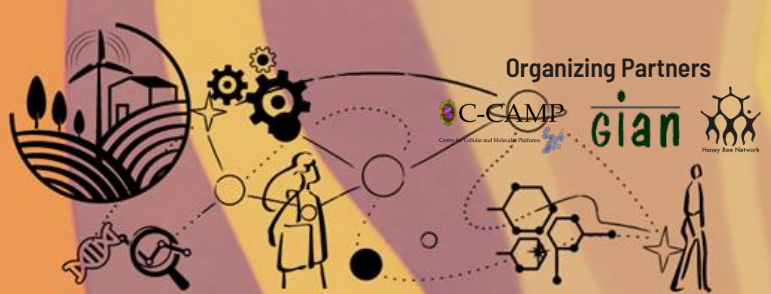


### Societal Impact

There are more than 435 million people in India who need such adaptive clothes temporarily or permanently. Inclusive and adaptive fashion gives them more dignity, and confidence and allows them to engage in professional and public spaces.

### Current status

The Zyenika website is currently preparing to unveil a new collection. It emphasizes their commitment to inclusivity with the slogan "Every body matters!"



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Agri-SeSo

**Shahid Ul Islam Bhat**  
Jammu & Kashmir



Innovation video

### Problem Addressed

Providing a multi-function agricultural tool for making farmers' work easy. The innovation also helps eliminate the uncomfortable bending posture during sowing seeds and soil drilling which used to cause pains in the finger, leg, back, and foot of the farmers.

### Technology

Agri-SeSo can perform multiple functions. It can be used for drilling soil, and sowing seeds, and can also be used as an axe. The main advantage of this product is that it has a foot spring which removes the need for bending during soil drilling and seed sowing which used to cause body aches.



### Societal Impact

The innovation improves farmers' working conditions and health.

### Current status

The product will be market-ready and commercialized by March 2025.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Maru Gulabi Sweet Potato Variety

Rawalchand Panchariya  
Rajasthan



Innovation video

### Problem Addressed

Have made a new Maru Gulabi Sweet Potato variety.

### Technology

This new variety has been developed using a selection process. It took seven years to develop this. This variety is organically grown and has a high content of hemoglobin. The variety doesn't require a lot of water to grow.

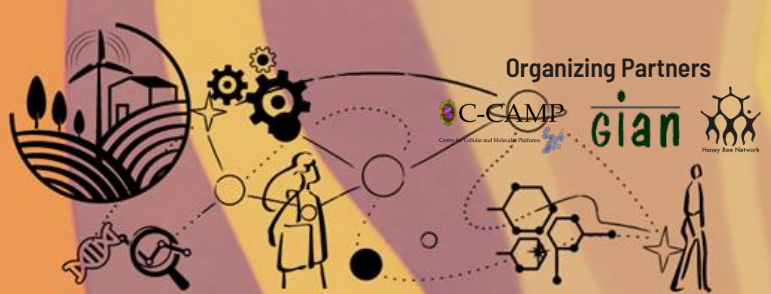


### Societal Impact

This new variety is a move towards organic agriculture and adding more to the list of super-foods.

### Current status

It has been sold in the market for the past two years.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Cole crop harvester cum weed uprooting device

**Aryan Prasad**  
Uttar Pradesh



Innovation video

### Problem Addressed

Harvesting crops like cabbage and sugarcane and uprooting weeds like Carrot Grass (also known as Congress Grass) required significant time and effort. When uprooting carrot grass manually, hands often become red, develop blisters, and may even get infected. Carrot grass competes with the crops planted in the fields, taking their place and preventing their growth. It absorbs all the nutrients from the surrounding soil. If cut, it regrows after a few days and cannot be eliminated by cutting alone. Farmers are at risk of diseases like asthma, skin infections, and even cancer due to exposure to carrot grass. To solve these issues, Aryan has created a machine that can perform multiple functions

### Technology

The machine streamlines the cole crop-cutting process, reducing farmers' workload and saving them valuable time. This machine allows farmers to harvest crops like cabbage, sugarcane, and corn without bending, making the process more efficient and less labor-intensive. By changing its blade, they can also uproot carrot grass, other weeds, and harmful plants without direct contact.



### Societal Impact

The innovation reduces farmers' drudgery.

### Current status

Have sold 25-30 machines. The innovation is affordably priced at Rs. 1000/-





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Machine to separate to husk and grain of paddy

**Bharat Panchal**  
Gujarat



Innovation video

### Problem Addressed

Automating the process of separating husk and paddy grain, which used to be manual-labour intensive work.

### Technology

Traditionally, separating husk and paddy grain is a labor-intensive task that was performed manually which was not only time-consuming but also physically demanding. This process often led to inefficiencies and lower productivity. The machine design automates this entire process, offering a more efficient, faster, and less labor-intensive solution. It uses a combination of mechanical components that effectively separate the husk from the grain with minimal human intervention. By mechanizing the husk-grain separation, the machine also improves the quality and consistency of the separation process. It ensures that the grain is not damaged during the process, which could often happen with manual methods. Additionally, the machine's ability to process large quantities of grain in a shorter time frame enhances productivity, making it a valuable tool for farmers and agricultural businesses looking to scale their operations.



### Societal Impact

This innovation not only modernizes a traditional farming practice but also holds the potential to significantly reduce labor costs and improve the economic viability of small to medium-scale agricultural enterprises. It reduces the physical strain of manual labor, increases productivity, and lowers labor costs for farmers, particularly benefiting small-scale producers.

### Current status

The innovator is planning to launch a similar innovation for wheat grains as well. The current machine is sold at Rs. 60000/-



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Wood splitting machine

**Jignesh Patel**  
Gujarat



Innovation video

### Problem Addressed

The problem addressed is the inefficiency and labor-intensive nature of traditional wood cutting methods, which require significant manual effort and time. Automating the wood cutting process aims to improve productivity, reduce physical strain, and enhance precision, making the task more efficient and cost-effective.

### Technology

The innovator has used a part of the JCB compressor and built a machine to cut wood. The length of the bark to be put in the machine for cutting has to be 2-5 ft. in length. The breadth of the wood is no restriction. There are multiple versions of the machine, 3 HP, 5 HP, 7.5 HP, and 10 HP.



### Societal Impact

Eases the manual labour required for wood cutting. It is most helpful for cutting wood required for funeral pyres in villages where most youngsters have left the village with only old age people living in the village.

### Current status

10 machines have been sold till now. The 5 HP machine is priced at Rs. 10000/- and the 3 HP machine is priced at Rs. 18000/-





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Machine to plant turmeric and ginger

**Sandip Panchal**  
Gujarat

### Problem Addressed

Solving for lack of labour availability for turmeric and ginger plantation.

### Technology

Usually, it requires 5-6 people for turmeric and ginger plantations. The innovation reduces the labour requirement to just one, the operator. The machine can plough and sow the seeds at the same time. The machine can be used to sow the seeds at different depths as per requirements. It works efficiently on a tractor of 35 or more Horsepower.



### Societal Impact

Reduces manual labour and makes the process more efficient and productive.

### Current status

More than 25 units have been sold. The machine is priced at Rs. 1,25,000/-



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Modification of traditional Samar

**Mohammad Ismail Mir**  
Jammu & Kashmir

Innovation video

### Problem Addressed

The traditional Kashmiri samawar is used to keep noon chai (salted tea) and kehwa warm using embers or charcoal as fuel. However, the intense heat from the embers often causes the tea to boil excessively, leading to waste, a change in flavor, and the release of continuous smoke, which cause to air pollution and smoke in the room.

### Technology

To solve the problems of overheating and smoke in the traditional Kashmiri samawar, the innovator has created a temperature and air controller. This device regulates airflow to the embers, maintaining a steady temperature that keeps the tea warm without boiling. This ensures the tea retains its authentic flavor and freshness, reduces waste, and enhances the tea-drinking experience. Additionally, by controlling the embers, the innovation minimizes smoke and significantly lowers CO<sub>2</sub> emissions, making the samawar more eco-friendly and improving indoor air quality.



### Societal Impact

The temperature and air controller for the traditional samawar addresses long-standing challenges faced by users. It ensures that tea remains consistently warm and flavorful without boiling over or going cold. This innovation reduces tea waste, enhances the tea-drinking experience, and preserves the cultural tradition of using the samawar, promoting convenience and sustainability in daily life.

### Current status

The organic pesticide, along with nursery produce, is now ready to market, offering sustainable solutions to farmers.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Organic Bio-pest

**Jorsing Syngkli**  
Meghalaya



### Problem Addressed

Mr. Jorsing Syngkli's innovation addresses the critical issue of agricultural pest management in a sustainable and cost-effective way. His organic pesticide tackles crop destruction caused by persistent pest attacks, particularly in paddy fields, which threatened farmers' livelihoods. It reduces reliance on expensive chemical pesticides, easing the financial burden on farmers. By providing a safer alternative, it mitigates environmental and health risks associated with chemical pesticides. Moreover, the innovation fills a gap in accessible, sustainable solutions by using locally sourced ingredients to promote organic farming and environmental conservation.

### Technology

Mr. Jorsing Syngkli's organic pesticide innovation combines practical and sustainable technologies with traditional knowledge. It utilizes nursery infrastructure such as bamboo structures, polyhouses, and biodegradable pots for cultivating medicinal plants essential to pesticide production. Through self-testing and validation, he ensures efficacy and safety through systematic trials on crops. His processing techniques extract and refine plant-based ingredients, maintaining quality and consistency. This innovation reflects a seamless blend of indigenous wisdom and grassroots technological applications, integrating modern tools for efficient cultivation, testing, and production.



### Societal Impact

Mr. Jorsing Syngkli's organic pesticide innovation has had a profound societal impact by enhancing agricultural productivity and improving food security through pest loss mitigation. It empowers farmers economically by providing a cost-effective alternative to chemical pesticides, reducing input costs while promoting sustainable farming practices that preserve soil health and biodiversity. His efforts to share knowledge foster community engagement, resilience, and innovation, inspiring others to adopt environmentally friendly solutions. By minimizing chemical pollution, his initiative supports environmental conservation. As a role model, Mr. Syngkli exemplifies how local ingenuity can drive social change, instilling pride and self-reliance in rural communities.

### Current status

Mr. Jorsing Syngkli operates a 5,000-square-foot nursery cultivating medicinal plants for his rigorously tested organic pesticide, proven effective and eco-friendly. A sales unit processes and markets the pesticide and nursery produce, providing sustainable income and supporting local farmers. He also promotes organic farming practices through community engagement and knowledge sharing.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Bee Hives Made of Straw & Bamboo

**Stephan Shadap**  
Meghalaya



### Problem Addressed

Shadap's innovation uses eco-friendly materials like bamboo and straw for hives, reducing deforestation and promoting sustainability. His low-cost hives make beekeeping accessible, empowering local communities through training and knowledge-sharing. By supporting healthy bee populations, the initiative enhances pollination, benefiting agriculture and biodiversity, while creating economic opportunities for small-scale entrepreneurs in rural areas.

### Technology

Shri Stephan Shadap's innovation blends traditional knowledge with sustainable practices, incorporating low-tech design and practical technology. His bamboo and straw hives reflect an understanding of bee biology, optimizing ventilation, temperature, and space for bee activity. By mimicking natural habitats, the hives enhance functionality and ease of management for beekeepers. This grassroots approach highlights craftsmanship as a form of technology, leveraging renewable, locally available resources for sustainable and effective beekeeping solutions.



### Societal Impact

Shri Stephan Shadap's innovation has empowered individuals and communities by enhancing livelihoods and food security, supporting environmental conservation, and promoting social inclusion through skill development. By bridging traditional knowledge with sustainable innovation, his efforts have created a holistic impact, fostering resilience and self-reliance within communities.

### Current status

The innovation is currently active and continues to have a positive societal impact in terms of economic development, environmental sustainability, and community empowerment. It is gaining traction as a scalable solution for rural areas looking for affordable, sustainable farming practices. The ongoing implementation and expansion suggest a healthy trajectory, with further potential for growth and replication.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## RI BHOI TRADITIONAL HEALERS ASSOCIATION

**Jasperson Manih**

Affiliation - Meghalaya Basin Management Agency, Meghalaya



Innovation video

### Problem Addressed

Traditional healing practices in the Ri-Bhoi region are at risk due to the dominance of modern medicine, dwindling medicinal plant availability from jhum cultivation and wildfires, and the lack of organization among healers. Limited community awareness and economic barriers further hinder their use. RBTHA addresses these challenges, ensuring the preservation of ancestral wisdom, community health, and environmental sustainability.



### Societal Impact

This initiative has significantly contributed to cultural preservation by safeguarding indigenous knowledge and traditional healing practices, ensuring their continuity for future generations. It has improved healthcare accessibility by providing the community with affordable and effective options through traditional herbal medicines. Additionally, it has fostered community empowerment by uniting over 500 traditional healers on a cohesive platform, encouraging collaboration and knowledge sharing.

### Current status

The association has grown from 320 to over 500 members, with 25 members forming the central body. It functions through seven sub-circles across Ri-Bhoi, ensuring decentralized and efficient management. By harvesting medicinal plants, it produces traditional medicines that are both affordable and accessible to the community. The initiative has generated an income of 429,820 through the sale of herbal medicines and seeds, showcasing a sustainable model. Additionally, a traditional clinic has been established to address the community's healthcare needs.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Coconut Shredding Machine

Alladi Prabhakar  
Telangana



Innovation video

### Problem Addressed

Used coconut shells, often discarded in dump yards, contribute significantly to environmental pollution. The water retained in the empty shells fosters mosquito breeding, leading to the spread of various diseases. To address this issue, a compact coconut shredding machine has been designed, intended for use in every village. This machine enables the reuse of waste coconut shells by producing coco peat and ccofiber, which can be utilized to create products such as coir ropes, mats, scrubbers, Ganesh idols, and other practical items.

### Technology

The coconut shredding machine is equipped with a highly efficient motor and gearbox, designed to be compact and movable for easy use in rural areas. Its primary goal is to eliminate coconut waste and transform it into valuable resources. Powered by a 3 HP induction motor connected to a 30:1 ratio gearbox, the machine operates in two stages. In the first chamber, raw coconut shells are crushed with steel blades. The crushed material is then transferred to a pulverizer, producing coco fiber and fine coco peat, which can be used to create various useful products.



### Societal Impact

This machine Shreds 100-150 coconuts per hour, which eliminates coconut waste in the dump yard and also creates employment in the rural areas by running this machine and marketing the bi-products of this used coconut shells

### Current status

This machine is completely designed and made changes according to user feedback. This machine is ready to use.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Multi Purpose Utility Vehicle

**Ashok Gorre**  
Telangana



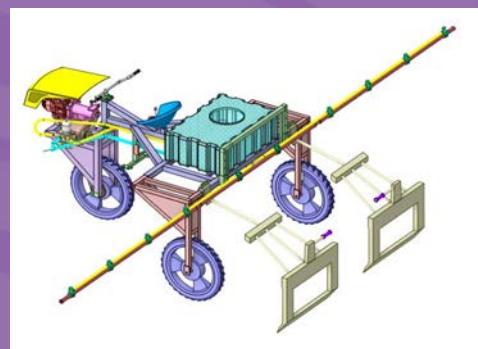
Innovation video

### Problem Addressed

Small farmers face significant challenges in accessing affordable, high-clearance machinery capable of performing multiple tasks like spraying and weeding. Existing solutions are often unavailable when required and pose health risks due to close operator contact. There is a critical need for an affordable, single-person-operated machine that integrates spraying, weeding, and safety features to address these issues effectively.

### Technology

The 3-wheeler sprayer and weeder is designed for efficiency and safety, featuring a 200-liter tank and an HTP pump for quick refills. It sprays pesticides or fertilizers from a safe 6-foot distance, covering 1 acre in just 12-15 minutes, while also performing weeding tasks. With high ground clearance and multi-functionality, it combines spraying and weeding in one machine. The design reduces health risks, is fuel-efficient, and includes an automatic fuel refill system, making it easy to operate by a single person.

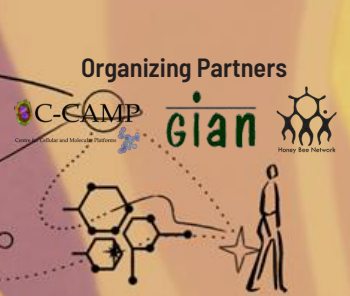


### Societal Impact

This innovation improves productivity, lowers costs, and enhances farmer safety, ultimately boosting livelihoods and promoting sustainable farming.

### Current status

MVP (Minimum Viable Product) stage



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Advanced Agricultural Spraying Solution

Shaik Moulali  
Telangana



Innovation video

### Problem Addressed

Farmers face challenges in spraying fields due to labor shortages and technical limitations of existing equipment, which struggles with spraying mixtures containing phosphorus and sulfate. These substances, often semi-solid or thickened, clog nozzles and disrupt the spraying process.

### Technology

Our advanced spraying machinery addresses existing limitations with a clog-free design for all mixture types, high-pressure capability for efficient long-distance spraying, stationary functionality to reduce labor, and adaptability to handle various fertilizers and pesticides, including phosphorus and sulfate mixtures.



### Societal Impact

This innovation empowers farmers by reducing labor dependency, improving productivity, and easing operations. It offers a cost-effective solution by minimizing equipment downtime and optimizing fertilizer and pesticide use, cutting costs and waste. By ensuring timely application, it boosts agricultural efficiency, enhancing crop yields and output. Additionally, it promotes sustainability by preventing wastage and reducing environmental contamination from overuse.

### Current status

This innovation empowers farmers by reducing labor dependency and addressing workforce shortages, improving productivity and operational efficiency. It provides a cost-effective solution by reducing equipment maintenance and ensuring optimal use of fertilizers and pesticides, cutting costs and waste. By enabling timely application, it enhances agricultural efficiency, improving crop yields and overall output. Additionally, it promotes sustainable practices by preventing solution wastage and minimizing environmental contamination.

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# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Multi Use Seed Transplanter

**Sharwan Kumar**  
Rajasthan

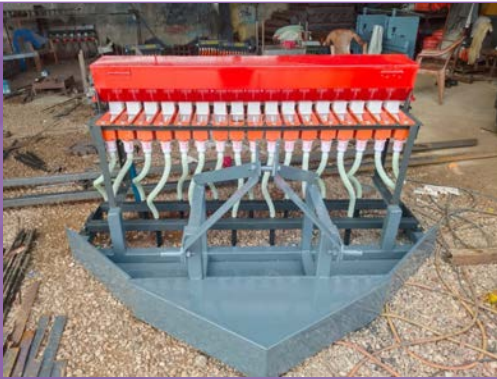


### Problem Addressed

Farmers face high costs from labor-intensive onion transplantation, the need for separate machines for different crops, and seed wastage due to imprecise traditional seed drills, all adding to financial and operational burdens.

### Technology

The Multi-Use Seed Drill offers versatility, capable of sowing a wide range of crops like onion, cumin, coriander, radish, mustard, ashwagandha, and cabbage directly in the field. Its efficiency reduces seed usage by up to 40% and eliminates the need for nursery setups. With customizable settings, it adapts to various seed types and field conditions. Designed for ease of use, it combines multiple functionalities into one machine, streamlining operations for farmers.



### Societal Impact

The Multi-Use Seed Drill reduces costs, saves seeds, and boosts productivity by streamlining sowing tasks. It promotes sustainability through optimized inputs and energy efficiency while making advanced technology accessible to small and marginal farmers.

### Current status

The Multi-Use Seed Drill has seen high demand among farmers, reflecting its growing popularity. With 50 machines sold so far, its market success continues to rise, driven by increasing interest across various regions.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Robotic Sprayer

**Sharwan Kumar**  
Rajasthan



Innovation video

### Problem Addressed

The manual spraying of pesticides in polyhouses exposes workers to hazardous chemicals, leading to severe health risks, including respiratory issues, skin diseases, and long-term ailments. Additionally, manual spraying is time-consuming, inconsistent, and often results in excessive pesticide use, harming the environment and increasing farming costs.

### Technology

This innovation operates through pre-programmed instructions or remote control, ensuring precise pesticide spraying to reduce wastage. It is electrically powered, minimizing reliance on fossil fuels, and features customizable settings to suit different crop needs and polyhouse sizes.



### Societal Impact

This solution offers significant benefits, including improved health by reducing human exposure to toxic pesticides, enhanced environmental sustainability by minimizing soil and water contamination, and greater cost-effectiveness by cutting labor costs through automation. It also ensures time efficiency, speeding up tasks, and creates employment opportunities by fostering skills in operating robotic systems.

### Current status

The robotic sprayer is operational and has been tested successfully in various polyhouse environments. Farmers using the device have reported significant improvements in efficiency and health outcomes. Plans are underway to scale up production and make the technology more affordable for small and medium-scale farmers. It has gained attention through media coverage and innovation awards, showcasing its potential for large-scale adoption.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Vineeth Mulberry Cutting & Binding Machine

**Kodimunja Praveen Kumar**  
SRR Agro Industries, Telangana



Innovation video

### Problem Addressed

Silkworms (sericulture) require precise specifications and timing for feeding on mulberry leaves throughout their life cycle. Due to erratic and undependable labor availability, mulberry farmers struggle to meet these requirements, pushing them towards shutting down operations.

### Technology

This farm automation innovation attaches to a tractor, integrating seamlessly into the rural ecosystem. Mulberry plants, pruned monthly to encourage regrowth, require extensive harvesting over their 15-year lifespan. This innovation automates the entire process, including pruning, discarding bad parts, re-pruning, collecting leaves, and bundling them for sericulture.

Key specifications are:

- Weight: 350 kg
- Material: MS
- Fuel: Diesel
- Dimensions: 8'x3'x3'
- Operating System: PTO to Pulley drive
- Maintenance: Grease & oil every 6 months
- Parts Replacement: Blades & belt (locally available)
- Repair & Maintenance: Easy DIY, 5000 per year
- Pruning Level: 3" to 3' from ground level



### Societal Impact

Mulberry farmers are facing severe crises, risking the closure of farms and causing major disruptions and losses throughout the silk industry value chain, which supports millions of people. This innovation addresses the root problem of labor shortage, serving as a vital solution to sustain and revive the entire silk industry.

### Current status

Fifteen machines have been sold to farmers in Telangana, Andhra Pradesh, and Karnataka. Approved by the Central Silk Board (CSB), the farmers are celebrating this achievement.



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



**Nirati Robo**

**Mende Srinivas  
Telangana**



Innovation video

## Problem Addressed

Farmers struggle with managing irrigation motors, requiring frequent visits for various contingencies. Despite using multiple gadgets and controllers, the need for constant monitoring persists. Additionally, each controller consumes energy, adding to the burden.

## Technology

The NIRATI ROBO innovation enables automatic motor ON-OFF based on farmer requirements, using air and water without any energy consumption. In farms, NIRATI ROBO can be installed near borewells to fill ponds automatically when they dry, providing an unattended water supply for animals year-round. Industries can leverage this device to save energy, poultry and dairy farms can benefit by adopting it for efficient water management.



## Societal Impact

The NIRATI ROBO system automates motor operation using air and water conditions, enhancing water and energy management. It conserves resources, reduces costs, and promotes sustainability by minimizing water and energy wastage. This efficiency supports agricultural productivity and benefits water-scarce regions.

## Current status

Few units of NIRATI ROBO have been made and demonstrated for all the aforesaid applications. Successful performance brought smiles to the beneficiaries.





# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Enhancement of Power And Mileage of Vehicle by Modifying Main Jet of The Carburetor

**Vivek Kumar Patel**  
Uttar Pradesh



Innovation video

### Problem Addressed

Efficient and 100 per cent combustion of fuel for better mileage and cost saving.

### Technology

The modified fuel jet injector ensures complete fuel combustion in the combustion chamber. It needs to be installed in the carburetor, enhancing mileage by 25-30 km. Additionally, the fuel injector plays a key role in improving fuel efficiency.

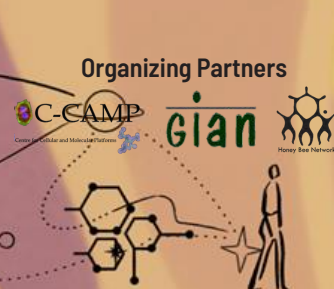


### Societal Impact

It increases vehicle's mileage and helps in reducing pollution by completely burning the fuel.

### Current status

A patent has been granted. Have sold more than 1000 units. The injector is priced between Rs. 400-500/-



# PEOPLE'S FESTIVAL OF INNOVATIONS

2024



## Khejdi Expert

**Rameshwar Lal  
Rajasthan**

### Problem Addressed

Rameshwar Lalji is a Kheri expert in Rajasthan and has been researching Khejri for a long time. In every part of Rajasthan, there are different varieties of Khejri available. During his search, he found a variety of Khejri which is naturally thornless. He has grafted that variety with a commonly used Khejri variety and created two new thornless varieties, named Thar Harit and Dhoro ki Tarkari

### Technology



### Societal Impact

This can be easily planted in rows. It is easy to pluck without farmers' hands getting wounded because it has no thorns. It also provides for good fodder for the animals. Farmers who have grown this variety have benefitted a lot. These varieties are of less height and therefore also easier to harvest and give better yields.

### Current status

This thornless Khejri variety is grown in and around the Bikaner district in Rajasthan. It is also being sent to other states such as Maharashtra, Madhya Pradesh, and Uttar Pradesh.



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